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An Ethnography of Numbers in Everyday Organisational Life

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Abstract:

This thesis presents a study of the interplay between what numbers do and what people do with numbers in everyday organisational life. Couched in an ethnographic perspective, the study draws on rich empirical material crafted from participant observations conducted at a Scandinavian hospital. The study focuses on how numbers work in everyday social interactions between doctors, nurses, patients, administrators, and managers. Three different kinds of numbers are analysed within the context of renal care – a clinical measure, a performance target, and a hygiene compliance rate. The theoretical framework draws on Austin's theory of performativity and Goffman's idea of dramaturgical performances. The thesis contributes to critical accounting studies and the field of sociology of quantification by extending, developing and, occasionally, challenging dominant notions of the *performativity of numbers* and *numerical reactivity*. Recent critical studies of quantification show that numbers are far from neutral, impersonal, and or objective; instead, they function as powerful actants. In much of the previous research, numbers appear to be so powerful, leaving little room for actors to resist their impact. While embracing the potential power of numbers, this thesis challenges the overly deterministic view of numbers by highlighting the agential leeway available to individuals in their everyday work. The thesis develops four types of possible interactions and outcomes between numbers and actors: *ignoration*, *manipulation*, *metamorphosis*, and *transformation*. In addition, it suggests three dichotomies to understand the reciprocal relationship between people and numbers as ways to engage with the dialectics of numbers in everyday organisational life.

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As I am writing this, springtime has finally arrived – even if only for a brief visit. Though spring is a time for rejuvenation and fresh starts, my mind wanders to what now lies behind me, and I cannot help but reflect on all those dear to me who have made this book possible. I have spent years writing this book, which I am now releasing into the world. In some ways, it has been a dear friend (and a worthy adversary, at times), but it has now become time for us to part ways. Writing these words, a feeling of melancholy washes over me as I realise that parting ways with this thesis marks the end of an era. But the two of us have grown apart. As this era comes to an end, I think back on the time gone by. Yet, as the sun hides behind a swarm of grey clouds and the temperature plummets, there is warmth and springtime in my heart.

Writing this book has been an incredible experience, and I can hardly express how thankful I am for having been given the privilege and opportunity to do so. Most of the time, my work on this study has been exhilarating, exuberant, and blissful. But, of course, it has not always been a joy. Sometimes, it has also been frustrating, stressful, and even depressing. But all the time, it has been a humbling experience. In these acknowledgements, I would like to express my deepest thanks to all of those who have encouraged me, endured me, tolerated me, cheered me, pushed me, suffered me, and celebrated with me.

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feedback on my work. I would also like to thank Roland Paulsen, Sverre Spoelstra, Mats Alvesson, and Yiannis Gabriel, for either commenting on my work or for having inspired me to think and write differently and more boldly.

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Everyone who writes a PhD thesis becomes part of a community. These are communities of fellow travellers composed of people who are all on their own journey, in their own ways and for their own reasons. In my own journey, I have cherished the company of Anna Stevenson, Janna Alvedalen, Anna Biering-Sørensen, Hossain Shahriar, Juan Ocampo, Johannes Berglind Söderqvist, Olga Solovyeva, Katharina Hug, Luisa Minßen, Olga Welinder, Camilla Civardi, Carys Egan-Wyer, Kalyan Pasumarthy, Patrik Stoopendahl, Nina Singh Gangoso, Oskar Christensson, Alexander Hedlund, and Erik Schultz. A particular thank you goes to Axel Welinder, Emilie Hesselbo, and Jonas Cedergren, for many long-winded conversations about research, life, and everything in-between. You have all made this a very special and rewarding journey for me.

All my friends are important to me, and you have all made a significant impact on my life, and in extension, the writing of this book. But not everyone has had the ungrateful task of engaging with my PhD work on a regular basis. But every one of you, in your own unique way, have helped me retain at least some semblance of sanity and clear thought throughout these years. I hope you know who you are – thank you! Though, I would like to express a particular thank you to Tomas Nelander, for commenting, critiquing, and encouraging me and my work for many years now. My dear friend Jesper Wahlqvist also deserve a special mention for having always been there for me when I have needed it the most. To Karsten Olofsson, I can honestly say that I would never have dared to pursue doing a PhD, to step into the unknown, and to stretch the possibilities of what kind of life and person I imagined for myself if it had not been for you.

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your everyday work lives and the struggles you face and overcome every day. Without you and your generosity, this book and the study it presents would never have been possible.

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Half-jokingly, I have often mentioned the importance of music for my writing. Indeed, I cannot think of a single section of this book that has not been written to some sweet tunes. But music has not just served the role of ambiance in the background while writing. On the contrary, music has frequently played a key role in setting the pacing, rhythm, back-and-forth, this-or-that, critical or supportive tone in the text. For this reason, a special kind of gratitude goes out to Bob Dylan, The Clash, Eric Clapton, Max Richter, Dire Straits, Van Halen, Michael Nyman, Phil Collins, The Kinks, John Lennon, Pink Floyd, Tom Waits, and Huey Lewis and the News, for having been tireless companions throughout these years.

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ABSTRACT

This thesis presents a study of the interplay between what numbers do and what people do with numbers in everyday organisational life. Couched in an ethnographic perspective, the study draws on rich empirical material crafted from participant observations conducted at a Scandinavian hospital. The study focuses on how numbers work in everyday social interactions between doctors, nurses, patients, administrators, and managers. Three different kinds of numbers are analysed within the context of renal care – a clinical measure, a performance target, and a hygiene compliance rate. The theoretical framework draws on Austin's theory of performativity and Goffman's idea of dramaturgical performances. The thesis contributes to critical accounting studies and the field of sociology of quantification by extending, developing and, occasionally, challenging dominant notions of the *performativity of numbers* and *numerical reactivity*. Recent critical studies of quantification show that numbers are far from neutral, impersonal, and or objective; instead, they function as powerful actants. In much of the previous research, numbers appear to be so powerful, leaving little room for actors to resist their impact. While embracing the potential power of numbers, this thesis challenges the overly deterministic view of numbers by highlighting the agential leeway available to individuals in their everyday work. The thesis develops four types of possible interactions and outcomes between numbers and actors: *ignoration*, *manipulation*, *metamorphosis*, and *transformation*. In addition, it suggests three dichotomies to understand the reciprocal relationship between people and numbers as ways to engage with the dialectics of numbers in everyday organisational life.

ABBREVIATIONS

AU	Administrative Unit
BHC	Basic Hygiene and Clothing
CKD	Chronic Kidney Disease
GFR	Glomular Filtration Rate
HAI	Healthcare Associated Infections
HD	Haemodialysis
PD	Peritoneal Dialysis
RCU	Renal Care Unit
SALAR	Swedish Association of Local Authorities and Regions
TP	Transplant

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It's in the way that you use it

It comes and it goes

– Eric Clapton

CHAPTER 1
INTRODUCTION

Thesis

This thesis is about the reciprocal interplay between what numbers do and what people do with numbers. Its main theoretical contributions are grounded in two broad and prominent theories concerning numbers and quantification: the *performativity* of numbers (Espeland & Stevens, 2008) and numerical *reactivity* (Espeland & Sauder, 2007). Inspired by Austin's (1962) seminal work on ordinary language use, numerical performativity proposes that numbers do not reveal or reflect some underlying reality; rather, they actively construct the realities they aim to depict (cf. Callon, 1998; Espeland & Stevens, 2008; Hines, 1988; Morgan, 1988). Reactivity, on the other hand, stems from Campbell's (1957) work on social experiments, and proposes that people alter their behaviour in response to being observed, measured, or evaluated (Espeland & Sauder, 2007). My contention is that the performativity of numbers is underdeveloped, and that the central idea of numerical reactivity has become misguided. These issues are important to address because whatever they do, or fail to do, numbers play a significant role in our everyday organisational lives.

It is difficult to escape the influence of numbers. We often need numbers to prove our worth, make our case, motivate change, or wield power (e.g. Cohen, 1982; Heath & Starr, 2022; Sauder & Espeland, 2009; Springer, 2020). To a significant extent, the fabric of our everyday experiences is woven by the numbers that permeate our existence (e.g. Badiou, 2008; Everett, 2017; Lupton, 2016; Mau, 2019; Shore & Wright, 2015). In organisational life, we use numbers to gain knowledge about people, things, and activities; we also use them to set targets, monitor, and judge what we and others do at work. Examples include measuring safety, risk, cost-efficiency, and performance (e.g. Hood, 2007; Mennicken & Espeland, 2019; Miller, 2001; Power, 1997). At our disposal, we have an array of quantitative tools such as performance metrics, accounting techniques, people

analytics, budgets, time management, quality assurance, evidence-based practices, efficiency measurements, rankings, grades, statistics, and so on (Malmi, 2016; Malmi & Brown, 2008). For better or for worse, numbers have become a crucial vehicle for the legitimacy claimed by people, institutions, and expert systems through processes such as audits (Power, 1997), evaluations (Dahler-Larsen, 2020), rankings (Espeland & Sauder, 2007), self-tracking (Lupton, 2016), and metrics more broadly (Mau, 2019; Muller, 2019). Perhaps then, it is not too surprising that it was recently estimated that we generate more numbers per day than the sum total of numbers that humanity produced between 2010 and the time when the first number was carved onto a clay tablet in Uruk more than five thousand years ago (Dahlén & Thorbjørnsen, 2021).

Several critical studies from sociology, accounting, public management, and other research disciplines have pointed out significant issues associated with numbers and measurements. For example, they have observed actors 'hitting the target but missing the point' (Bevan & Hood, 2006), a variety of 'unintended consequences' (e.g. Espeland & Stevens, 2008; Hacking, 1982; Lapsley, 2008; Llewellyn & Northcott, 2005; Power, 2004; Sauder & Espeland, 2009; Sauder, Espeland, & Chun, 2019), 'perverse effects' (Willmott, 2011), along with 'harmful' (Espeland & Sauder, 2007), 'tragic' (S. Feldman, 2004), and 'counter-productive' outcomes (Boedker, Chong, & Mouritsen, 2020) caused by numbers and measurements. At the same time, numbers continue to proliferate in organisations – and elsewhere – because people require more numbers to challenge, replace, or improve existing ones (e.g. Fırtın, 2023; Levay, Jönsson, & Huzzard, 2020; Paradeise & Filliatreau, 2016). However, scholars have also pointed out how actors can experience positive effects from numbers, such as an increased sense of worthiness at work (Beer, Micheli, & Besharov, 2022), empowerment in illness management (Essen & Oborn, 2017; Jorland & Weisz, 2005; Lupton, 2016), and a statistical community for gay rights activism (Espeland & Stevens, 2008; cf. Igo, 2007). Still, studies consistently point back to Power's (2004) mystery, or similar conundrums, of how it is that 'numbers are powerful and fragile, simple and qualified, trusted and distrusted simultaneously' (p. 779, e.g. Levay et al., 2020; Rindova, Martins, Srinivas, & Chandler, 2018). In other words, despite the heavy reliance on numbers in organisations, and the many studies that have set out to shed light on key issues about them, the ways in which numbers work in organisations largely remain a mystery.

This study explores how numbers work in everyday organisational life using an ethnographic research approach. My view has been that the meaning and

significance of any number must be studied in the everyday situations where its role is played out. This is partly because every number is able to signify more than the object it aims to represent since numbers are also tied to various practices and practitioners, as well as organisational and societal structures and norms (cf. Hopwood, 1983). Moreover, the ways in which numbers are frequently used in organisations suggest that numbers work by being inscribed with meanings that can be mobilised and transported across time and space (Robson, 1992). Nonetheless, as numbers are produced, transported, and used, many important things may be lost in the process or altered in significant ways (cf. Espeland & Stevens, 2008; Power, 2004). It is only after we have measured something that we 'really' know what it was that we were measuring. So, the focal idea of the study has been to observe, *in situ*, what numbers do and what people do with numbers. At the heart of the study is about 250 pages of rich transcribed fieldnotes I crafted while doing fieldwork at a large Scandinavian hospital over a two-year period.

The thesis contributes to critical accounting studies and the emergent sociology of quantification by extending, developing, and occasionally challenging dominant notions of the performativity of numbers and numerical reactivity. Ultimately, the thesis addresses and contributes to the all too thin body of works that show the agential leeway available to actors in their everyday work lives (e.g. Boedker et al., 2020; Dorn, 2019; Rahman, 2021). I also develop a set of conditions for the performativity of numbers to occur in social situations, which have arguably been lacking in extant research (cf. Boedker et al., 2020; Dorn, 2019; Fırtın & Karlsson, 2020). Specifically, actors need to actively engage in performances that enable the performative potential in numbers. Hence, the thesis develops four types of possible reciprocal interactions and outcomes between actors and numbers: ignoration, manipulation, metamorphosis, and transformation.

Problem

Today, the dominant thesis in critical studies on quantification is that numbers wield a powerful influence over organisational actors (Espeland, 2022; Mau, 2020; Pollock, D'Adderio, Williams, & Leforestier, 2018; Ringel, Espeland, Sauder, & Werron, 2021; Yu & Huber, 2023). Over the past few decades, critical studies have problematised measurements and showed how numbers, instead of being objective and neutral tools, can serve as formidable sources of power,

manipulation, and dominance (e.g. Ball, 2015; Chelli & Gendron, 2013; Espeland & Stevens, 2008; Mennicken & Salais, 2022; Miller, 2001; Morgan, 1988; Muller, 2019; Ody-Brasier & Sharkey, 2019; Porter, 1996; Power, 2004; Shore & Wright, 2015). Over time, they have become so powerful that authors frequently suggest they leave people with few options other than to conform to the numbers (cf. Sauder & Espeland, 2009). For example, numbers are claimed to change the ways people work, how they make decisions, what they see as aspirational, and what they value in their work (e.g. Beer et al., 2022; McGivern & Fischer, 2012; Rijcke, Wouters, Rushforth, Franssen, & Hammarfelt, 2016; Sauder & Espeland, 2009; Willmott, 2011). I do not mean to diminish the importance of these studies, but I contend that the force of their argument has allowed an underlying belief, akin to a form of social determinism, to sneak in and dilute the emancipatory aims that propelled many of these studies at their inception (cf. Espeland & Stevens, 2008; Miller & Rose, 1990). That is to say that numbers have become portrayed as being so powerful that it has become difficult to envision ways in which people can resist, ignore, or escape them.

One of the most salient claims about the strength of numbers is Sauder and Espeland's (2009) thought-provoking paper on US law school rankings. Couched in a framework of institutional theory and Foucauldian discipline, they establish an unambiguous platform for the unescapable power of ranking numbers. Essentially, they argue that both seductive incentives and coercive threats make it impossible for institutional actors to escape or ward off the influence of numbers. The authors assert that 'efforts to contain rankings pressures, to buffer their impact, almost always fall short' and that 'organizations cannot buffer the effects of rankings' (p. 79). Since then, others have followed suit. By studying the discourses surrounding sustainability ratings, Chili and Gendron (2013) launch an overarching idea of an 'ideology of numbers', suggesting that performance targets and ratings act as powerful disciplinary instruments that actors would be well-advised to take seriously. Chatterji and Toffel (2010) argue that firms that score low on corporate environmental ratings – as if succumbing to some natural law – will improve their performance as a result of the ratings. Sharkey and Bromley (2015) go even further, suggesting that rankings can be so forceful that they can have indirect effects, meaning even those firms that are not rated will be prone to altering their affairs because of the ratings and how they have seen firms similar to them reacting to the rankings (an old tale in institutional theory, I am sure). Surprisingly, Lewis and Carlos (2022), on the other hand, suggest that good ratings, rather than encouraging continuous efforts to maintain a high score, may cause actors to relax their efforts and fall behind. Taken together, despite diverging

effects, the basic idea is that numbers engender more or less dramatic changes in an organisation, typically with the effect that actors are 'transformed to comply' with the measurements (e.g. Llewellyn & Northcott, 2005; cf. Yu & Huber, 2023).

Some recent studies have begun to question and challenge the strength ascribed to the numbers by scholars (e.g. Boedker et al., 2020; Clementino & Perkins, 2021; Dorn, 2019; Pollock et al., 2018). They have shown that actors have more options than to merely conform to the measurements. For example, Pollock et al. (2018) argue that organisations no longer simply conform to measurements but are instead 'transformed' by them through a reflexive interplay between the organisations, rankings, and wider ecosystems. On the other hand, Clementino and Perkins (2021) suggest that there is no single response to ratings and go on to outline various forms of passive or active resistance and conformance available to actors as they react to measurements. However, even when actors may wish to comply with the measurements, they may not always know how to do so, especially when the measurements are performed by opaque third-party algorithms (Rahman, 2021). Dorn (2019) proposes that at least some actors can ignore the numbers, specifically those who belong to professional groups that enjoy an elevated social status, such as medical doctors. Boedker et al. (2020) go further by showing that the responses of organisational actors may not only produce unintended effects, but that the actors are sometimes able to counter the rankings entirely. I contend that the conditions under which numbers become powerful must be developed and carefully examined (cf. Boedker et al., 2020; Dorn, 2019; Fırtın & Karlsson, 2020) along with the agential leeway that is available to organisational actors when they react to the numbers (cf. Lapsley, Miller, & Steccolini, 2020; Power, 2015).

The problem that this thesis sets out to address can be summarised in three points. *First*, both mainstream and critical conceptions of numbers, albeit from widely different vantage points, portray numbers as powerful, either because of their use-value or because of the strong pressures they impose on actors towards conformity. The way I see it, the outstanding problem is not if numbers can be powerful, or even to what effect, because both scholars and practitioners have repeatedly shown examples of that. Instead, it is a matter of when and how the numbers can become powerful (cf. Yu & Huber, 2023). Or, conversely, when, and how they fail. My position is that theories on performativity are well suited for analysing such aspects, per se, but that extant studies fall short of examining the conditions by which the numbers can accomplish what the scholars claim them to accomplish.

Second, I argue that even those studies that do discuss conditions for performativity rely on conditions that are not appropriate for numerical performativity. Instead, these conditions tend to rely on what I see as broader, or more abstract, systems (e.g. Callon, 2007) or to Austin's (1962) felicity conditions about words in ordinary language use, or speech acts (Searle, 1969). *Third*, because of the lack of relevant conditions for numerical performativity, the ways in which people can react to the numbers have become opaque, meaning that for a person who wishes to react differently (than to conform) to the numbers, it is unclear how they should go about doing so. I contend that the performativity thesis has become performative. In so doing, much of the critical project that underlies the performativity thesis undermines itself as it effectively shuts down, rather than opens up, alternative worlds and ways to act differently (cf. Callon, 2010). Similar to Callon (2007 p. 332), I contend that performativity studies should 'exhibit the struggle between worlds that are trying to prevail' (see also Yu & Huber, 2023). In essence, this thesis explores such struggles in detail.

Questions

Because this is an exploratory study, I use a set of comprehensive and exploratory research questions to guide the thesis. The overarching question posed in this thesis concerns *how numbers work in everyday organisational life.* This question is meant to frame the thesis, and although I answer it, it should be obvious that no one answer will ever be able to exhaust all possible answers to this question. I applied a similar, albeit somewhat sharper frame, with the two sub-questions: *what do numbers do?* and *what do people do with numbers?* These two questions are meant to elucidate the central concepts of the thesis, which are performativity and reactivity, without constricting the broader phenomena with overly strict definitions from the outset, or by strangling the openness, creativity, and scope of the ethnographic spirit. In other words, these questions allow for a deeper level of analysis into the basic features that make numbers do things, and people's reactions to these things.

- *How do numbers work in organisations?* How can numbers and social actors shape each other?
- *What do numbers do?* Under what conditions can numbers be made performative?
- *What do people do with numbers?* What agential leeway do organisational actors have when reacting to the numbers?

Contributions

The major contributions of this thesis are made by developing, extending, and occasionally challenging both emerging and foundational aspects of the performativity of numbers (Espeland & Stevens, 2008) and numerical reactivity (Espeland & Sauder, 2007), along with the bodies of work that have built upon their foundation. The thesis extends the emerging literature that has shown how the social effects of numbers are not 'predetermined outcomes' or derived from 'fixed properties' of the numbers, but through 'skilled performances' (Lorino, Mourey, & Schmidt, 2017) and 'situated accomplishments' (Goretzki, Mack, Messner, & Weber, 2018) within a 'reciprocal social process' between the numbers and the actors who use or relate to them (Fauré, Cooren, & Matte, 2019).

The thesis contributes to the understanding of the performativity of numbers by advancing a view of performativity as an ongoing social accomplishment made possible by the skilled social performances of social actors (e.g. Goretzki et al., 2018; Lorino et al., 2017) in ways similar to, but different from, what Vollmer (2007) and Fauré et al. (2019) have proposed. It further extends extant knowledge of the 'pragmatic, dynamic and situational achievements of using numbers' in everyday social interactions (Vollmer, 2007 p. 597). I enter the ongoing conversation about how individuals can act differently from what the numbers prescribe (e.g. Boedker et al., 2020; Dorn, 2019; Fauré et al., 2019; Power, 2015). In so doing, the thesis develops and advances a set of fleshed out conditions for how numbers can be made performative and heeds the call from scholars such as Boedker et al. (2020), Fırtın and Karlsson (2020), and Dorn (2019) for increased attention to be paid to the conditions needed for performativity to occur. The thesis develops a novel understanding of how numbers do things by returning to the basic premise of performativity, its 'felicity conditions' (Austin, 1962) and by re-imagining these for a 'performativity of numbers', which, since Espeland and Stevens (2008) proposed them as 'working premises', have largely been left as such – underdeveloped and underutilised.

When it comes to reactivity, this thesis extends the range of studies on reactivity by investigating numbers other than those used for rankings to three other kinds of numbers – administrative, medical, and performance numbers. Moreover, in contrast to how many other studies have focused on organisational responses to measurements (e.g. Heffernan & Heffernan, 2018; Pollock et al., 2018; Sharkey & Bromley, 2015), this thesis contributes with an in-depth analysis of numerical

reactivity at the level of individual actors, which reveals their different reactions to the numbers (cf. Wallenburg, Quartz, & Bal, 2016). Dorn's (2019) call for studies to show how individual actors react to numbers in their daily work, rather than to show aggregate reactions on a group level and thus obscuring the ways in which people may ignore or resist measurements, has been heeded. The study also contributes to the scholarship proposing that emotions are key drivers for how people react to measurements (e.g. Dorn, 2019; Elstad, 2009; McGivern & Fischer, 2012). I provide a detailed analysis of the various possible reactions to the numbers.

The study develops an in-depth understanding of how numbers and social actors can alter each other in a process of transformation. This line of reasoning ties into what Pollock et al. (2018) have described as 'reflexive transformation'. However, contrary to these authors, who focused on action at an organisational level, this thesis shows how actors and numbers can both be transformed at the level of day-to-day interaction between the two. The thesis contributes to ongoing discussions on how, why, and when people care for numbers (e.g. Fauré et al., 2019; Rahman, 2021; Wallenburg, Essén, & Bal, 2021) by developing a theory on the reflexive and reciprocal processes between social actors and the numbers they use or relate to. I show the interplay between numbers doings things, people reacting to these things, and the chain of altered meanings and additional actions that ensue. I develop a theory describing four reciprocal processes between numbers and social actors, namely ignoration, manipulation, transformation, and metamorphosis.

Broadly speaking, the thesis contributes to at least two research streams, critical accounting studies and the sociology of quantification. I would also argue that it contributes to organisational studies by bringing the role of numbers into organisational theory, something that seems fairly absent in its domain (cf. Miller & Power, 2013). Berman and Hirschman (2018) have argued that studies on quantification ought to be funnelled down into a more decisive research stream along with a theoretical body that is trim and fit. However, I disagree with their contention. In my view, numbers, and the role they play in organisations, as well as in everyday life, are too multifaced, dynamic, and ambiguous to fit nicely into any single uniform – regardless of how sophisticated it may appear to be. Instead, this thesis contributes broadly to the call made by Mennicken and Espeland (2019) for a focus on displaying the 'essential ambiguity of quantification', and to track the shifting relations between measurement, classification, and aggregation, and to examine spaces of contestation where quantification practices operate.

Setting

A hospital provided fertile grounds for this study. Hospitals are arenas where various values, aspirations, hopes, fears, and struggles are played out – often times with the power of numbers serving as a deep-rooted guiding principle for healthcare professionals (cf. Johannessen, 2019). Indeed, the medical profession is painstakingly quantified (Muller, 2019; Weisz, 2005), with a wide range of quantitative tools readily employed by professionals, as well as by those who attempt to govern them (Levay et al., 2020). At the same time, it is often through the intersection of various measurements or quantitative systems that the different and often competing institutional logics present in these settings may clash or stimulate surprising allegiances between organisational groups (Chua, 1995).

In their everyday work, healthcare professionals rely on, or are subjected to, a variety of numbers that affect their work practices. For example, numbers are used for intensified time management (Kujala, Lillrank, Kronstrom, & Peltokorpi, 2006), performance management (Aidemark & Funck, 2009; Bevan & Hood, 2006), clinical test values (Dixon-Woods, Leslie, Bion, & Tarrant, 2012), national quality registries (Funck, 2015; Levay, 2016), financial practices (Brunsson, Lapsley, & Miller, 1998), administration (Bornemark, 2018), rankings (De Rijcke, Wallenburg, Wouters, & Bal, 2016; Dorn, 2019), as well as public accountability and risk assessments (Andersen & Whyte, 2014; Andersson & Liff, 2012). The numbers produced by such systems may not operate in splendid isolation, neatly decoupled from each other, and acting in accordance with the intentions of their makers. On the contrary, such numbers have been found to interconnect in ways that can interact and impinge on each other's effects (Pflueger, 2015), as well as produce unforeseen and unintended consequences (Levay et al., 2020). For example, financial controls in healthcare can make a hospital more efficient, but they may also cause medical professionals to shift their focus, from patients to the administrative demands posed by the controls, making the services they provide 'more efficient, but less humane' (Morgan, 1988).

Medical professionals also make up a distinct group of people. Both in the sense of belonging to a *profession*, which separates them from other occupational groups, but also in the sense of being *medical* professionals, which separates them from other kinds of professionals – such as academics, lawyers, or police officers. Professions, regardless of occupation, are typically defined as groups with significant autonomy over their own work, having internal mechanisms for oversight, state licensure, and controlled educational establishments (Abbott,

1988; Levay & Waks, 2009). In other words, to be part of a profession normally requires extensive training and experience, as well as participation in the socialisation processes required to become a full-fledged member of its professional 'community of practice'. Such processes may include having aspiring members embrace a particular knowledge base or set of social values espoused by the community to become full members (Cruess & Cruess, 2020). One difference between the medical profession and the professions mentioned above is that the former involves what Goffman (1961) calls "people work", literally and figuratively. That is, medical professionals may, figuratively speaking, work with people as their "product", such as when they help patients at a distance by aiding them in managing their blood sugar levels, or they may quite literally work on them, such as when a surgeon operates on a patient, or when a nurse performs a health check-up. However, not all medical professionals are alike. While professional work is salient at hospitals, it is important to remember that professionals, just like people in general, are heterogenous. That is to say that common-sense ideas about some deeper and shared sense of common purpose, drive, ambition, and value-system are best treated as an empirical question, rather than a lay assumption (cf. Blomgren, 2003).

Structure

There are nine chapters in this book. This first chapter has just set the stage for the rest of the study by providing a backdrop for how, and where, I have studied numbers in social interactions, the problem with numbers in organisational life, and why people should care about this study. I have also outlined the research questions addressed by the study, along the with main contributions of the thesis.

In the next chapter, I review what I have considered to be significant literature on numbers in organisations relevant to this thesis. The chapter examines different ways of seeing numbers, ways that people use numbers, things that numbers do, and how studies have shown people reacting to numbers. In essence, this chapter presents and examines studies and *theories about* numbers. At the end of the chapter, I highlight some outstanding issues of numbers in organisational life that call for closer inspection.

Chapter three develops the theoretical framework through which I address the most intriguing aspects of numbers in everyday organisational life. In contrast to its preceding chapter, this chapter does not set out to detail various studies about

numbers. Instead, the chapter outlines, combines, and elaborates *theories for studying* what numbers do and what people do with numbers. In so doing, a set of 'felicity conditions' (Austin, 1962) adapted to the study of performative numbers is proposed, and a dramaturgical perspective (Goffman, 1959) is suggested as a way to emphasise and incorporate the seemingly minor and trivial things that make numbers work.

The fourth chapter outlines the ethnographic research approach that I have used in this study. My research process is mapped out using Van Maanen's (2011a) taxonomy of 'fieldwork', 'headwork', and 'textwork'. The chapter offers a comprehensive account of the methods I have used, ranging from what is meant by fieldwork and participant observations, obtaining informed consent, and ensuring informant confidentiality, to how I crafted my empirical material and performed my analysis.

In chapter five, I present the empirical setting in which the study took place. The chapter provides thick descriptions of everyday work at the renal care unit (RCU) and how everyday care is organised there. I describe common work routines together with the physical, symbolical, and social work environment I observed while being in the field, such as clothing, décor, and everyday talk.

Chapter six is the first of three chapters where I explore how three different numbers work at the RCU. I explore the different social interactions with one of the most salient numbers found at the RCU, a medical number called the Glomular Filtration Rate (GFR). Several ways in which the GFR number plays a crucial role in social interactions between actors such as patients and nurses are also examined.

The seventh chapter covers the peritoneal dialysis (PD) goal that the RCU uses as a performance target. By exploring a set of different social interactions, I analyse how the number, through skilled performances by different actors, informs and influences everyday actions at the RCU. These performances are then shown to subtly alter the meaning of the social interactions between the nurses and their patients.

In chapter eight, I trail the making of an administrative number, the Basic Hygiene and Clothing (BHC) compliance rate. This number is supposed to capture and reflect everyday work practices and behaviours of clinical staff members. Yet, it is shown how this is not achievable for those tasked with creating the number. Instead, these actors come up with new and creative strategies to generate the number.

Chapter nine brings the thesis together by discussing the three numbers presented in chapters six to eight, along with key aspects developed in the thesis. I argue that numbers work by engendering a social force that prompt people to enact performances. If these performances are successful, they may realise the numbers' performative potential. I also propose a two-by-two matrix to theorise about the reciprocal interplay between social actors and numbers.

The final chapter concludes the study by returning to the research questions launched in the first chapter. The chapter also offers some broader implications derived from the study. These implications are made up of three pairs of dichotomies. Rather than pigeonholing the role of numbers into some reified and stable position, these pairings are meant to reflect how the social significance of numbers is continuously formed, enacted, and re-enacted by the social interplay between people and numbers. The thesis is wrapped up with some final remarks.

CHAPTER 2
LITERATURE REVIEW

Introduction

We live in a world of numbers. Whether they are visible to us or not, numbers play a crucial role in how our society functions, and they have become increasingly important to us as a means of communication, as well as for how we are able to understand ourselves and our social worlds (e.g. Berman & Hirschman, 2018; Cohen, 1982; Mau, 2019; Mennicken & Espeland, 2019; Mennicken & Salais, 2022; Porter, 1996). This chapter extends the problematisation of numbers, which was launched in the previous chapter, by outlining what we already know about what numbers do, and what people do with numbers, as well as what is left for us to discover about the relationship between these aspects. In other words, this chapter is made up of *theories about numbers*.

In organisational life, the role of numbers often materialises through calculative techniques and quantitative tools. Indeed, there are vast arsenals of quantitative tools readily available for organisations (e.g. Malmi & Brown, 2008; Mau, 2019). To name a few, there are performance metrics, accounting techniques, people analytics, budgets, time management, quality assurance, evidence-based practices, efficiency measurements, rankings, grades, statistics, and so on. Although Badiou (2008) contends that numbers can be used for anything we can think of, it is helpful to point towards some common uses for numbers in organisations. Hood's (2007) taxonomy of numbers used for targets, rankings, or intelligence is one way to look at the role of numbers in organisations. An alternative is to view numbers as tools for organisational control, assessment, and decision-making (cf. Malmi, 2016). More broadly, numbers also provide ways to visualise and talk about things (cf. Espeland & Stevens, 2008). In other words, in organisations, numbers can be tools, images, language, intelligence, and targets.

What, then, are numbers supposed to do? Dominant views on quantification maintain that numbers should either match some aspect of the world and accurately reflect that aspect or construct some aspect by forming it. These two viewpoints on quantification make up what is called *reflective* and *formative* measurements (Diamantopoulos & Siguaw, 2006). Simplified, these two viewpoints suggest two fairly opposing views on reality and our knowledge of it (Finn & Wang, 2014). Reflective measures start from a so-called realist position and presume that whichever object is measured exists 'out there' and that it is, therefore, possible to capture it in numbers through measurement. Reflective measurements pose questions such as to what extent a particular number can capture and contain that which it claims to measure. A formative measure, on the other hand, leans towards a constructivist view of the world. This view maintains that measurements, so to speak, create the objects they study, but that these numbers nonetheless have real effects and pragmatic use-value in the world.

In this chapter, I will discuss an array of intriguing and influential studies on numbers. When it comes to previous studies, and various concepts outlined in this chapter, these are essentially of a *sensitizing* kind (Blumer, 1969). According to Blumer (1969), when we approach our social worlds, 'sensitizing concepts' provide us with a general sense of direction, clues, and suggestions for where to look and what to look for. In other words, the objective of this chapter is to suggest where to look and what to look for. To do so, I will present an array of studies using four overarching themes. The first theme is how we *see numbers* in which I elucidate different yet common attitudes and views on numbers. The second theme comprises different *ways of using numbers* in organisations. The third theme advances the notion that *numbers do things*. The fourth theme builds on the concept of reactivity and discusses how *measurements may cause people to react to the numbers*.

Seeing the Numbers

We may 'trust in numbers' (Porter, 1996), but what is it about them that we trust? The ways in which we see and treat numbers can be elucidated by considering Desrosières (2001) four attitudes towards the reality of statistics. While Porter (1996) explains why numbers are given authority, Desrosières (2001) helps us understand what such authority can mean (cf. Espeland & Stevens, 2008). He outlines four positions on how professional and administrative groups view and

engage with statistics. He maintained that these groups each have and employ a language of their own as they relate to, use, and judge statistics. These attitudes are referred to as *metrological realism, accounting pragmatism, proof in use,* and *constructionism.*

Metrological realism

Reality is up for grabs, and measurement is its grappling hook. According to Desrosières (2001), those with an attitude of treating statistics with a form of metrological realism will tend to consider social objects to be just as real as a mountain or a tree. The basic idea is that social objects, even if they are not visible to us, are 'real' and exist regardless of if they measured or not. When they are measured, a language relating to reliability, accuracy, precision, bias, and measurement error is employed to convey just how well – or poorly – the statistician has been able to lure reality into his/her trap (cf. Desrosières, 2001; Power, 2004). Once caught, the idea is to re-release reality into the realm of probability, where the law of large numbers reigns supreme (cf. Desrosières, 1998). Once a sufficient portion of reality has been caught in the trap, a world of generalisations, extrapolation, and forecasting become available to the researcher (Desrosières, 2001; cf. Hacking, 1990). From this perspective, the reality of numbers must be safeguarded by vast systems of quantification – the denser the system, the more reality can be ascribed to the numbers (Desrosières, 1998). From this viewpoint, quantification relies on rigorous, defendable, and enduring systems that require significant expertise, discipline, and coordination, as well as time, money, and political muscle (cf. Desrosières, 1998; Espeland & Stevens, 2008).

Accounting pragmatism

If we can agree that the numbers are real, then they are real. It is from such a perspective that Desrosières (2001) points out that accounting only makes sense within a pragmatic framework of accomplishing something, such as policy guidance, public monitoring, or business administration. For those who perpetuate accounting pragmatism, the key thing to consider is not the nature of reality 'as such', but rather the extent to which actors can *agree* on what is real and what is not – and perhaps more importantly, how to value such things. Desrosières (2001) draws on Morgenstern's (1963) work to point out how proponents of accounting pragmatism view and regard "errors" in business accounts.

Morgenstern suggested that 'lies' are an ambiguous notion in accounting. Lies may be clear-cut when it comes to entirely fictional accounts, such as when stock inventories are made up or knowingly exaggerated. However, even then, it is, of course, possible to further distinguish between lies and mistakes by probing the intentions of the 'deceiver'. Indeed, Morgenstern (1963) pointed out that, for example, an 'overly optimistic' take can instead be viewed as an 'error in judgement' (cited in Desrosières, 2001 p. 343). The 'realness' of accounting numbers therefore depends on the trust that is placed in them, or the trust that actors can generate for them (cf. Fauré, Brummans, Giroux, & Taylor, 2010; Pentland, 1993; Power, 2003).

Proof in use

What makes a number 'real' depends on its usefulness. A third perspective on numbers comprises what Desrosières (2001) calls proof in use. He writes "for users in this third group, 'reality' is nothing more than the database to which they have access" (p. 346). For these users, if the internal validity of the dataset they use can be safeguarded against impurities, and the calculations they produce with the data are consistent, and the results they obtain are plausible, these are viewed and treated as being 'real'. A sceptic might say that the role of these users is to build fantasy worlds to which they assign rules and laws. If the inputted data is perceived by users as meeting certain quality standards, the computations made using the data can be considered as 'real'. Data that does not meet those criteria can be dismissed with the adage 'shit in, shit out'. However, the actual quality of the datasets can often be opaque or black-boxed (cf. Berman & Hirschman, 2018; Desrosières, 2001). Indeed, the rise of big data and algorithms has accentuated these aspects and made their underlying calculations even more opaque (cf. Mau, 2019; Michael & Lupton, 2016; Rahman, 2021; Rieder & Simon, 2016). From the viewpoint of proof in use, trust is either placed – or assumed – in the datasets that actors use to produce reality claims. The success of such claims depends on their consistency and the usefulness of the claims.

Constructionism

The fourth perspective is what Desrosières (2001) calls constructionism. The basic premise of constructionism is that numbers and statistics do not just reveal or reflect some underlying reality, but actively construct it (e.g. Callon, 1998; Espeland & Stevens, 2008; Morgan, 1988). For example, Hines (1988) argues

that a balance sheet does not just show an organisation's assets, liabilities, and equity. Rather, the balance sheet and its numbers perform by establishing a particular way of seeing and understanding what an organisation represents. As individuals act based on these understandings, a sort of loop is established through which a particular (numerical) representation of the organisation becomes reified and treated as 'real' (cf. Morgan, 1988). How this happens is elegantly phrased by Hines (1988):

> We create a picture of an organization, or the 'economy', whatever you like, and on the basis of that picture (not some underlying 'real' reality of which no-one is aware), people think and act. And by responding to that picture of reality, they make it so: it becomes 'real in its consequences'. And, what is more, when people respond to that picture, and the consequences occur, they see it as proof of our having correctly conveyed reality. Clever, isn't it? That is how society works (p. 257).

The constructionist viewpoint is not meant to suggest that there is no such thing as reality; rather, it suggests that reality is slippery and easily eludes to be captured by the numbers. Desrosières (2001) elegantly posits that statistical work establishes reality by 'providing the players with a language to put reality on stage and act upon it' (p. 352). Hence, accounting practices establish a particular way of representing, understanding, and acting upon events and practices (cf. Miller, 2001). For example, Chelli and Gendron (2013) have employed the term 'ideology of numbers' as a coherent set of ideas and practices that promote a selective understanding of reality through the use of numbers (cf. Morgan, 1988). A powerful way of using numbers is, therefore, not only to reveal things, but also to conceal realities one does not want others to know about (Brunsson et al., 1998). Thus, as argued by Kurunmäki et al. (2016), attention must be paid not only to when numbers are mobilised but also to when they are 'conveniently ignored'.

Ways that People Use Numbers

Some scholars argue that a basic problem with any number, in stark contrast to many lay and popular conceptions, is that *numbers do not speak for themselves* (Fauré et al., 2019; Pentland, 1993). On the contrary, studies have suggested that speaking in the language of numbers, that is, crafting, communicating, and interpreting numbers requires significant skill and effort (Cohen, 1982; Espeland & Stevens, 2008; Heath & Starr, 2022). Some also suggest that numbers are

reliant on frames of meaning and significance that need to be performed, or accomplished, within the social situations in which they are used (Vollmer, 2007). For example, Fauré et al. (2010) show that numbers not only need to be 'correct' but that they must also be communicated, explained, and justified by those who use them. Similarly, Lorino, Mourey, and Schmidt (2017) maintain that any use of numbers is a social accomplishment made possible by the collaborative and skilful efforts of all participants involved in a particular situation.

Next, I will focus on three themes that are suggestive of important and characteristic ways that people may attempt to use numbers in social situations. First, as a means of *managing* and controlling work. Second, to engage in *image management*. Third, as ways to *convince and persuade* an audience.

People use numbers to manage organisations

Numbers have been proposed to make people, things, and practices visible and controllable (Miller, 2001; Miller & Rose, 1990). It is said that by using numbers, people can govern themselves, others, organisations, or even nation states by taking 'action at a distance' via 'centres of calculation' (Latour, 1987; Miller & Rose, 1990). Today, such centres are not just available to organisations, but more or less readily available to all of us through our smartphones (cf. Lupton, 2016). These centres rely on numerical inscriptions, such as data, reports, censuses, financial figures, and performance metrics that inform about processes, places, people, or things (Bloomfield, 1991; cf. Robson, 1992). Action at a distance implies that these inscriptions, such as accounting numbers, offer a window into an organisation's happenings, allowing people to see, manage, and intervene in its activities from a distance (Chua, 1995). According to Robson (1992), the underlying idea that facilitates action at a distance is claimed to be that people are able to form mobile, stable, and combinable inscriptions through which social events can be materialised, transported, and transformed from abstract social aspects into actionable numbers.

Numbers may shed light on things, but they also cast shadows that obscure our sight. Within organisations, numbers and calculative practices are relied upon to organise, plan, and control work, as well as to diagnose problems and evaluate solutions. However, many authors have observed that practices aiming to reflect reality 'as is' are flawed and bound to conceal as much as they reveal (Meyer & Rowan, 1977; Roberts, 2018; Strathern, 2000; Tsoukas, 1997). According to Strathern (2000), practices of auditing, quality assurance, and accountability

establish realities that are 'knowingly eclipsed'. That is, the real working of an organisation, its social structure, cultural values, and modes of organisation become ignored in favour of audit trails and paper piles (cf. Meyer & Rowan, 1977; Strathern, 2000). At worst, organisational members may find themselves in a Kafkaesque environment, under circumstances where their own meanings are made irrelevant and rendered meaningless by the importance attributed to measurements that seem decoupled from their everyday work. At the same time, their lives and success depend on being perceived as meeting or complying with these very measurements (Roberts, 2018).

Several authors have pointed out that performance metrics, evaluations, and rankings can have a seductive appeal and play an important role in how managers and decision-makers attempt to manage their organisations (e.g. Dahler-Larsen, 2020; Kurunmäki et al., 2016; Mau, 2019). The appeal to 'manage by numbers' (Hood, 2007; Hood, Dixon, & Wilson, 2009) has been a salient feature in public administration under the reign of New Public Management (NPM). A key feature of NPM and management by numbers is its supposed fairness, objectivity, and universal applicability (cf. Hood, 1991). For example, it has been pointed out that NPM can appeal to taxpayers, or 'unsatisfied customers', by promising to transform 'mismanaged' public services into lean and efficient market driven service providers (Kelly, 2005; Kurunmäki et al., 2016). NPM practices carry promises to not only make services more efficient but also to show just how efficient they have become. In other words, making public services more efficient may mean little unless accompanied by figures that show just how much more efficient these have become.

Numbers that are aimed at helping decision-makers can serve many functions, or dysfunctions. For example, numbers can be used to set performance targets, to establish rankings that compare the performance of different units, and to provide intelligence that informs decision-making and choice (Hood, 2012). Evidently, management by numbers can be a powerful tool, but it can also be the cause of organisational dysfunction. On the one hand, managers may feel compelled to rely on numbers to show what their organisation is doing, and how well it is doing it. On the other hand, staff members may find it necessary to escape or game the numbers to get things done, or cope with increasing demands put on them from work intensification or performance targets. According to Hood (2012), whether management by numbers is 'successful' or not depends on the social context in which it is embedded, namely either hierarchist, individualist, egalitarian, or fatalist worldviews. Explaining these, he writes:

> "hierarchist," comprises faith in scientific and other forms of established authority, a stress on well-defined rules of social interaction, and a stress on the importance of groups or collective units. A second, usually termed "egalitarian" or "sectarian," comprises faith in group processes, a rejection of social distinctions, and a stress on the importance of protecting those who are seen as vulnerable. A third worldview, usually termed "individualist," comprises faith in individual effort and skill, a belief in competition and rivalry, and a stress on the importance of allowing people to make their own decisions and mistakes and live with the consequences. A final worldview, often termed "fatalism," comprises skepticism about any received recipe for good human organization, a preference for social detachment and isolation, and a stress on the importance of unpredictable chance events in human affairs (p. 589 f.).

We do not need to embrace either of these worldviews as the best possible way to explain culture or individual sensemaking. However, they do reinforce the overarching view that the meanings, significance, use, and importance of numbers in an organisation depend less on any inherent quality of the numbers, but instead on the characteristics and skills of those people who use and relate to them.

People use numbers for image management

Numbers lend themselves well to being used in performances by organisational actors to establish a particular image of themselves, others, or their reality (Levay et al., 2020 p. 469 f.). One reason why numbers can be successfully deployed in performances stems from their symbolic usefulness. For example, as a source of information, numbers can be used to symbolise competence, authority, and legitimacy (cf. Feldman & March, 1981). Moreover, scholars such as Porter (1996) and Power (2004) have argued that people tend to trust in numbers, and that the use of numbers may bestow their wielders with an image of objectivity, impersonality, and precision. Indeed, Kurunmäki et al. (2016) have argued that the use of numbers can allow people to perform seemingly rational assessments in situations that have ostensibly been dominated by emotion, whim, or subjective judgment. In other words, the symbolic and signalling effects of numbers lend themselves to be employed by people to manage situations and impressions.

Studies have also proposed that the objectivity of numbers should not be seen as a given, but as a performance (Porter, 2012; Vollmer, 2007). Numbers enable strategies aimed at containing individual subjectivity, or even dispelling it entirely from ourselves or our organisations. Indeed, Desrosières (1998) suggests that it is

perhaps not objectivity, per se, that is most interesting to examine, but rather the processes or performances through which the world, an act, or a person is made to appear objective (cf. Porter, 1996; 2012). In organisations, numbers have frequently been used to manipulate accounts in order to convey the desired impression, to legitimate someone's performance, or to reinforce a particular position (cf. Boje, Gardner, & Smith, 2006). Often, it seems as if we, as an audience, also 'want to believe' in the numbers. Indeed, numbers are frequently taken for granted as evidence even when they are disconnected from the spheres of technique that granted them such trustworthiness at their inception (Carruthers & Espeland, 1991). For example, Solomon, Solomon, Joseph, and Norton (2013) show how investors believed in staged performances of private social and environmental reports performed by investees, despite being aware of many instances of misrepresentation and fabrication.

People use numbers to convince and persuade

Several scholars have shown that accounting numbers hold symbolic value and can be used as rhetoric (e.g. Arrington & Schweiker, 1992; Carruthers & Espeland, 1991; Chua, 1995, 1996). The very act of deploying numbers, or requesting them, in social interactions can be a rhetorical move in and of itself. For example, Potter, Wetherell, and Chitty (1991) have argued that numbers can be rhetorically mobilised to undermine alternatives, rather than to capture and reflect reality. What is more, numbers can be used by individuals as rhetoric to convey a seemingly neutral and objective image and to dismiss non-quantitative arguments as being subjective or mere opinion (Chua, 1996). As seemingly objective tools, numbers can be used by individuals to mobilise and advance interests that are justified by a professional, precise, and impersonal language (Mazmanian & Beckman, 2018; Michaud, 2014). In communicative acts, the purpose of numbers may not merely be to inform, but to convince and persuade (Carruthers & Espeland, 1991; Espeland & Stevens, 2008).

Numbers can be used as a shared language. According to Chua (1996), numbers can make it possible to overcome linguistic and cultural barriers by abstracting away the cultural, temporal, historical dimensions, and even asymmetrical power relations underpinning the numbers. One implication of numbers acting as a form of 'shared language' is that they can provide a source of empowerment to those who may otherwise struggle to get their point across. For example, Essen and Oborn (2017) suggest that numbers used between patients and their physicians in rheumatology care allowed patients to interact with their physician on more

equal terms. Similarly, Springer (2020) shows how female gender advisors relied on numbers to convince their reluctant male colleagues to advance the women's goals and agendas. However, these techniques came at a cost, as the advisors felt that qualitative data was superior for capturing the experiences of those they served, yet they had to favour the numbers to get things done. Michaud (2014) observed a similar paradox by showing how a manager, in order to manage without numbers, had to show and impress his board of directors that he could indeed master the numbers before being allowed to manage without them.

Things that Numbers Do

The list of things that numbers allegedly do is extensive. For example, Espeland (2022) proposes that numbers can both highlight and obscure, integrate and disaggregate, represent and intervene, structure people's interactions, create new objects and new kinds of people, mark and measure, and tame and inflame, as well as humanise and dehumanise (cf. p. vii f.). More examples include how numbers express or mediate power, focus our attention, and shape opportunity structures (cf. Berman & Hirschman, 2018; Espeland & Yung, 2019); how they contribute to the maintenance of social order (Vollmer, 2003); how they silence different or alternative voices or perspectives (Lehman, 2019); how they can discipline us (Espeland & Stevens, 2008; Mau, 2019); how they call for explanations (Fauré et al., 2010; Townley, 1996); shape identities (Goretzki & Pfister, 2022), render the world and people governable (Bartl, Papilloud, & Terracher-Lipinski, 2019; Miller, 2001; Miller & O'Leary, 1987; Miller & Rose, 1990); commensurate (Espeland & Stevens, 1998); facilitate control at a distance (Robson, 1992); establish new ways of acting and being (Hacking, 1986; Miller, 2001); make certain things visible, while obscuring others (Chelli & Gendron, 2013; Covaleski & Dirsmith, 1988; Kurunmäki et al., 2016; Morgan, 1988); frame action and responsibility (Andersen & Whyte, 2014; Essen & Oborn, 2017); and encourage competition (Mau, 2020; Mueller-Gastell, 2022).

Next, I will focus on some of the ways in which numbers have been claimed to do things by shaping and generating how people *think, feel*, and *act* (e.g. Desrosières, 1998; Espeland & Stevens, 2008; Hacking, 1982; Mau, 2019; Mennicken & Espeland, 2019; Mennicken & Salais, 2022).

Numbers make us think in certain ways

Numbers can make us think differently. In our daily lives, numbers can act as powerful social resources, through which we can relate to social environments, institutions, and events, as well as to other people and to our own identities, bodies, or souls (Vollmer, 2007). A telling and rather ironic example is Goretzki and Pfister's (2022) study on how accountants resisted productivity measures because they thought that these measures undermined their own professional identity. The case is ironic because productivity measures, amongst other numbers, are the bread and butter of accounting. However, numbers do not need to be bad or be met with resistance to change how we think about things. Numbers can also act as sources of empowerment and awareness. For example, Alfred Kinsey's survey of sexual behaviour, published in 1948, showed that around 10 per cent of US men aged between 16–55 were, or had been, in a homosexual relationship for at least three years. These numbers helped to install a 'statistical community' (Igo, 2007) and cultivated a new way of thinking amongst gay people which, in turn, empowered them to form a social movement for gay rights activism (Espeland & Stevens, 2008; Mennicken & Espeland, 2019).

Numbers can free our minds but trap our thoughts. According to Lupton (2016), many individuals are distrusting towards bureaucratic elites and professional experts, but they also mistrust themselves and their own experiences. Within the rapidly evolving 'quantified self-movement', people seek to gain knowledge of themselves, their bodies, and minds through numbers. Those drawn towards the quantified self-movement often display a fundamental lack of trust in their own ability to understand themselves and their own experiences. What is more, their own judgement is seen as untrustworthy and imprecise by their own assessment (Lupton, 2016). The numbers produced by self-tracking devices, and made available through various technological gadgets, can emancipate individuals from the ambiguities of their own experience, but also from their reliance on experts. For example, numbers that represent bodily functions or medical values can empower patients to become active agents of their own therapy and be less reliant on the power and authority of their doctors (Andersen & Whyte, 2014; Essen & Oborn, 2017; Jorland, Weisz, & Opinel, 2005; Lupton, 2016). However, at the same time as numbers can be liberating and empowering, we may become trapped by them – such as when a woman asked herself: 'do I even exist without my Fitbit? Without data, am I dead?' (Lupton, 2016 p. 16).

Numbers can cause people to think in ways that are harmful to themselves or others. For example, Black (2015) points out how data errors caused 60 primary care centres in England to be publicly labelled as providing a poor quality of care. Even though the data error was rectified, and the care units labelled as satisfactory three weeks later, doctors at these care units still felt that their reputation had been tarnished and that their ability to instil trust and confidence among their patients had been undermined. There are, unfortunately, also examples of outright fraudulent and corrupt numbers (cf. Prabowo, 2022). For example, Boje et al. (2006) have shown how the Enron Corporation, prior to going bankrupt in 2001, used accounting numbers in creative and fraudulent ways in order to display an image to investors and the public, aimed at making them think of the company's finances as being in good shape, despite being on the brink of bankruptcy.

Numbers do not need to be fraudulent or erroneous to cause problematic ways of thinking. Sometimes, an over-reliance or strict adherence to numbers can have unintended and even tragic consequences. For example, Feldman (2004) studied and analysed decision-making at NASA following the Challenger and Columbia disasters of 1986 and 2003, respectively. He found that NASA had a problematic 'culture of objectivity'. This culture led to misunderstandings regarding the flight risks involved in these, and other, missions. These misunderstandings, he argues, were the result of the culture at NASA, which relied on an over-confidence in quantitative data that was interwoven with the marginalisation of non-quantifiable data. Thus, instead of facilitating well-informed and safe decisions, the culture at NASA paved the way for disasters as idiosyncratic and uncertain aspects were ignored – aspects that, if they would have been acknowledged, communicated, and taken seriously, could have prevented these disasters from happening.

Numbers make us feel things

Numbers evoke emotions. It is not uncommon to overhear numbers described as being 'cold hard facts'. The implication, of course, being that numbers ward off any emotion, subjectivity, or personal opinion that may otherwise risk contaminating even the purest of facts and turn them into mere opinions (cf. Chua, 1996). However, Heath and Starr (2022) suggest that:

> when people advocate for 'dry statistics' there seems to be a component of identity and ideology. There is a purity to the idea of "dry statistics" that

> numbers people swear by. Analytical people want to believe that their hard-earned numbers will carry the day (p. 75).

According to the authors, numbers are not emotionless; on the contrary, they stir and rely on the emotions of those who present or act upon them. This, claims the authors, is what made Florence Nightingale such a pioneer when it came to her use of statistics. In order to propel people into action, she made tinder-dry statistics spark action by translating them into concrete and vivid numbers that could be sad, impolite, angry, and even tragic (cf. Heath & Starr, 2022 p. 71-76).

Emotional numbers rely on their form, how they are presented, and how they are understood by their audience. Espeland and Stevens (2008) note that 'those who produce and consume such pictures for a living want them to be not only errorless but also compelling, elegant, and even beautiful' (p. 422; cf. Lupton, 2016 p. 100 ff.). Similarly, Heath and Starr (2022) propose that for numbers to stick in our minds, they need to be communicated in forms that convey simplicity, concreteness, and familiarity. This is, of course, provided that the presenter wants the audience to understand and engage with the numbers. Thus, in cases where the opposite holds true, presenters may attempt to communicate the numbers and themselves in boring, technical, and complicated ways to ward off prying eyes and to shield the numbers from critique and contestation (Porter, 2012). Perhaps then, those who become disinterested or anxious about numbers have been exposed to techniques that, by design or inability, make them seem difficult, vague, outlandish, and superabundant.

How people feel about numbers depends on their 'numeracy' – their ability to understand numerical information (Cohen, 1982). For example, in an experiment on numeracy and emotion, Petrova, Van der Pligt, and Garcia-Retamero (2014) showed how participants with higher levels of numeracy displayed more emotional sensitivity to risk. Indeed, Kennedy and Hill (2018) show how emotions matter in everyday engagements with numbers and their visualisations. They also point out how certain groups were more proficient in numeracy than others, suggesting that this is because:

> certain groups (often white, middle-class men) are better equipped to understand mathematical and statistical information, not because they are more naturally capable of doing so, but because they are significantly better represented in maths, science and computing subjects at school and beyond (p. 845).

While there are many positive emotions that can arise from numbers, such as pleasure, relief, love, empathy, and excitement, there are also numbers that stir up

negative emotions such as anxiety, confusion, shame, guilt, fear, frustration, sadness, anger, and sorrow (Kennedy & Hill, 2018). In fact, Pentland (1993) argues that one of the most important tasks that auditors perform is to manage the meanings and emotions of those they audit in order to make them 'feel comfortable' with the numbers.

Numbers do not just make us feel things, but those feelings can propel us to do things (good and bad), or they can hurl us into inaction. Slovic (2007) questions why certain numbers fail to spark feelings within us and do not motivate us to act – particularly in relation to catastrophes, genocide, and illnesses that roam the world on a massive scale. In essence, he shows how the larger the numbers become, the less we tend to care about them – or rather, about the individuals who disappear behind the numbers. Surprisingly, we are not just more strongly moved and prone to act based on a single number compared to large numbers, but our decline in affect and motivation goes down already at the number two! In other words, we are more likely to feel and react strongly to a single case, say of the shooting or illness of an individual, than to a massacre or an epidemic. Therefore, the work that often goes into making vast and correct accounts of the suffering in the world may be striking the wrong chord in their audience. This is because 'the numbers don't really matter because we are insensitive to them' (Slovic, 2007 p. 90).

Numbers can make us act

Numbers can cause people to act. They can have strong normative implications, motivating us to alter the numbers by changing our behaviour (cf. Kurunmäki et al., 2016; Lupton, 2016). For example, when we use gadgets to measure our calorie intake or the number of steps we have taken during a day, the numbers that are presented to us can affect our everyday behaviour both in subtle and obvious ways. Such metrics do not just reveal or produce a number of calories or steps. They also tie into broader societal discourses, such as healthy eating and regular exercise. In turn, these numbers establish targets and thresholds for what constitutes a 'normal', 'good', or 'bad' metric. In this sense, such numbers can be understood as producing 'calculative selves', by creating responsible and calculating individuals (cf. Miller, 2001 p. 380 f.). Thus, numbers can have strong normative implications, prompting us to alter the numbers by changing our behaviour, for example, by changing our calorie intake or by walking more frequently.

Numbers can govern us in subtle ways. Miller and Rose (1990) have argued that calculative techniques can also function by establishing 'self-steering mechanisms' that make it possible to govern over individuals without breaching their formal autonomy. For example, when individuals are encouraged to internalise efficiency as a measure of self-worth, while organisations provide them with standardised frameworks that enable them to compare themselves to others. In this way, any deficiency that is revealed by these comparisons may also become a personal shortcoming (cf. Miller & O'Leary, 1987). Seen this way, calculative systems launch powerful norms that generate tracks and trajectories for an individual's self-fulfilment. Moreover, if being an efficient person is not enough in its own right, one can leverage it to advance one's career and salary. In other words, numbers can affect the everyday lives of individuals by guiding, governing, shaping, and influencing who they are or ought to become (Kurunmäki et al., 2016).

How People React to Numbers

This part of the chapter covers a wide selection of studies on how numbers and measurements can influence people's reactions. Reactivity to ranking numbers has been given a somewhat privileged position in this chapter. This is because studies on reactivity to rankings have formed a significant stream of contemporary research on numbers and quantification in domains ranging from schools and higher education (Chun & Sauder, 2022; cf. Elsbach & Kramer, 1996; Elstad, 2009; Espeland & Sauder, 2007; Heffernan & Heffernan, 2018; Willmott, 2011), to healthcare (Dorn, 2019; McGivern & Fischer, 2012; Wallenburg et al., 2021; Wallenburg et al., 2016), CSR and environmental performance ratings (Sharkey & Bromley, 2015; Slager & Gond, 2022), IT companies and enterprise systems (Pollock et al., 2018), intellectual capital (Boedker et al., 2020), rating agencies (Jeacle & Carter, 2011; Mehrpouya & Samiolo, 2016), and digital platforms used by 'gig-workers' (Rahman, 2021). Ranking numbers have also been established as a prime example of the strength and influence that numbers can hold over organisational actors (e.g. Sauder & Espeland, 2009; Willmott, 2011). It is therefore not too surprising that this research stream also includes many of the discussions and debates to which this thesis makes its core contributions (e.g. Boedker et al., 2020; Dorn, 2019; Pollock et al., 2018; Wallenburg et al., 2021).

A pivotal study on reactivity is Espeland and Sauder's (2007) seminal study, in which they proposed reactivity to public measures as a generative idea for how '*individuals* alter their behaviour in reaction to being evaluated, observed, or measured' (p. 6 my italics). In brief, they observed that the reactivity engendered by ranking systems at law schools in the US caused a redistribution of resources, a redefinition of work, and a proliferation of gaming strategies. Implicit in their argument was that rankings, along with other forms of measurements, caused people to react to the numbers they encountered. The authors proposed that being measured changed how people made sense of situations, interpreted behaviours, and justified decisions. Given the significant influence of their concept, I will use it as the basis for discussing some of the outstanding problems and assumptions of reactivity as well as how certain developments have exposed both new and time-honoured issues in organisation studies.

In the forthcoming, I will draw upon many of the studies mentioned above to elucidate some outstanding problems and questions regarding numerical reactivity. First, I will discuss how numerical reactivity has been viewed by scholars either as a cause for concern or as an opportunity to be embraced. Thereafter, I will outline Espeland and Sauder's (2007) seminal contribution on the 'mechanisms of reactivity'. Following this, I will present key studies on different forms of reactions to measurements in organisations. Finally, at the end of this chapter, some of the outstanding questions and problems regarding numerical reactivity that this thesis seeks to address and contribute to are presented.

Reactivity as a cause for concern, or opportunity to be embraced?

Reactivity is frequently utilised, or combated, in our daily lives and the organisations we engage with (Espeland & Sauder, 2007; cf. Mennicken & Espeland, 2019). When we measure things, we often do so because we expect ourselves or others to react to the measurement in some way – or we take precautions to prevent such actions. Espeland and Sauder (2007) mention two principal views on reactivity:

> in the first view, the independence of measures and the social world they target is threatened by reactivity; in the second view, the job of measures is to harness reactivity, to create a form of reactivity that causes people to change their behavior in desired ways (p. 7).

The authors propose that reactivity can be seen either as a problem to be avoided or as a tool to be used. Irrespective of one's position, the core idea is that

measurements are, in fact, doing something. Many of the studies described above have seemingly embraced the idea that wherever measurements are present, reactivity follows – although notable exceptions include Pollock et al. (2018) and Dorn (2019).

Whether such reactivity is a 'good' or 'bad' thing, of course, depends on the measurement and how the involved actors view it. Nevertheless, there tends to be two opposing viewpoints. On the one side, the ranking is seen as producing 'unintended' (Sauder et al., 2019), 'counter-productive' (Boedker et al., 2020), 'harmful' (Espeland & Sauder, 2007), or even 'perverse' (Willmott, 2011) effects. On the other side, there are those who maintain that reactivity is a force for good that propels organisational actors to conform to market pressures and expert evaluations in ways that allow these actors to up their game (e.g. Chatterji & Toffel, 2010; Sharkey & Bromley, 2015). In other words, measurements either present problems or provide opportunities to those involved with or exposed to them. But surely, there must also be ways in which measurements such as rankings are simply ignored and do not do things?

Such ways do exist, but the studies that have explored them are easily counted. Among them is Dorn (2019), who studied reactivity in the US hospital sector and asserts that a diverse array of current research assumes too much when it comes to measurement schemes. These studies:

> instantaneously equates their widespread presence with their efficacy, i.e. that their implied attention and behaviour-altering capacity is inevitably achieved (p. 330).

Pollock et al. (2018) have made a similar claim about current work on reactivity, suggesting that other studies operate under the assumption that once a 'a salient indicator' is presented as a template for how an organisation's reality ought to be, the organisation will alter itself to fit the template (p. 57). Both studies borrow the term 'mechanical reflexivity' from Lynch (2000) to suggest a view in which measurements can be seen as an action that causes an ongoing series of 'actions, responses, or adjustments to the system' (p. 27). Pollock et al., (2018) even go so far as suggesting that the dominant reactivity thesis is akin to what Lynch calls a 'knee-jerk' reflex with unintended behavioural effects within an organisation (p. 65). Indeed, there are good reasons to suspect that reactivity is reduced to a form of isomorphism with extra steps (e.g. Gioia & Corley, 2002; cf. Willmott, 2011).

Furthermore, Pollock et al. (2018) proposed to solve the issue of what they call 'reactive conformance' by suggesting that "organisations no longer simply

conform to dominant measures but are instead 'transformed' by them" (p. 65). Their claim is more nuanced, as will be shown below, but one is nonetheless left to wonder if the same could not be said about those who adhere to the rankings. In other words, is not an organisation that changes its ways to conform with one or more measurements also 'transformed'?

Both Dorn (2019) and Pollock et al. (2018) emphasise the need for studies focusing on individual meaning and decision making – albeit in quite different ways. Dorn (2019) is clear in suggesting that extant studies have 'overlooked the actors' interpretative processes' (p. 330). Pollock et al. (2018) provide a case in point as they propose 'gaming' measurements to be an 'unintended behavioural effect' of measurements (p. 66). If the unintended behavioural effect of actors strategically manipulating measurements to their own advantage strikes one as an oxymoron, it is because it is. But only if one is under the impression that it is *individuals* who react to measurements, rather than systems, institutions, or organisations. The notion makes sense if the assumption is that ranking systems, along with the numbers they produce, have a will of their own, and that organisations can produce responses that are somehow detached from the actions of individual actors. While such responses may sometimes be possible (e.g. Heffernan & Heffernan, 2018), my position is that many of the nuances of what numbers can do, and the possible reactions that may be available to actors are obscured by studies that aggregate individual responses into organisational ones.

Mechanisms of reactivity

In their landmark study, Espeland and Sauder (2007) proposed two principal mechanisms for reactivity to explain the patterns shaping how people make sense of things. These were *commensuration* and *self-fulfilling prophesies*. They developed the concept of mechanisms by suggesting that rankings elicit feedback loops that affect people's attention and how they interpret things. These things, in turn, form patterns that influence how people think and act (cf. Espeland & Sauder, 2007 p. 11).

The first mechanism, commensuration, was first proposed by Espeland and Stevens (1998), who defined it as 'the transformation of different qualities into a common metric' (p. 314). Numbers have almost always been used to represent something other than themselves (cf. Vollmer, 2007); for example, through 'marking' (Espeland & Stevens, 2008), such as when a number is more or less arbitrarily assigned to signify or represent something else, like the numbers on the

jerseys worn by players in a soccer team. What distinguishes commensuration from other measurements is that it converts multiple different qualities into one single, unified number. Rankings, for example, commensurate by turning complex organisational realities into a single number on a league table. Commensuration, Espeland and Stevens (1998) suggest, is therefore a powerful, symbolic, interpretive, and intensely political process that can transform the world by creating new social categories that affect how people make sense of the world. It accomplishes this by producing simplified yet authoritative numbers. According to Espeland and Sauder (2007), as a mechanism for reactivity, this is how it happens (note, the authors use of "we" is meant to suggest people in general and not the authors' own position):

> we assume that the meaning of numbers is universal and stable. The erasure of context and the people who make numbers is crucial for their authority. We trust that the methods that accomplished this erasure were rigorous enough to constrain the discretion, politics, and biases of those who create them […] we suppose [numbers] do not require the same sorts of interpretation and translation as other modes of communicating […] Believing in the universality of numbers discourages us from noticing how generative they are: that, as numbers circulate, we recreate their meaning by building them into new contexts and reinterpreting their meaning. We can use numbers to do new things without having to acknowledge that they now mean something different (p. 18).

For a mechanism, however, commensuration perhaps lacks a binding agent that ties our sensemaking to our everyday actions. Society is riddled with situations where we may have a particular way of making sense of a situation, but still choose to act in ways that are contrary to that understanding. One of the most important conditions for commensuration to generate reactivity, at least according to the authors, is for the numbers to be public measures. This is because the publicness of the numbers instils fear or anxiety among those who are subjected to the measurements, and it is these emotions that trigger the actors to act (Espeland & Sauder, 2016). However, it is much less clear just how public a number must be to cause actors to react to it, if at all. For example, in the privacy of their own home and for their eyes only, people look down on the weight scale and choose to react to the number they see. Few studies have explored publicness as a condition, and the reason for this, I suspect, is that so many studies have focused on salient and official rankings where the public character of the measurement has been a given.

The publicness of a measure seems to mainly be about the exposure it causes for those who are exposed to it and the emotions that are stirred up as a response (Espeland & Sauder, 2007; cf. Espeland & Sauder, 2016). Indeed, other scholars have identified emotions to be key drivers for how actors react to measurements (e.g. Dorn, 2019; Elsbach & Kramer, 1996; Elstad, 2009; McGivern & Fischer, 2012). For example, Dorn (2019) contends that an important condition for reactivity is the risk of humiliation. However, this claim could perhaps be nuanced by suggesting that pride can also have a similar function for how people may react to measurements. In other words, public numbers may instil a fear of humiliation in actors, or tempt them with the prospect of receiving acclaim (cf. Sauder & Espeland, 2009). However, it is also possible to infer that commensuration connects sensemaking to action, not through enticement or fear, but through a depletion of alternative sensemaking opportunities and an elimination of choices available to actors (cf. Espeland, 2015). We need to know more about what constitutes a 'public' number and if the publicness of a number is a condition for reactivity, or if it is simply one out of several potential mechanisms that can cause actors to react to the numbers.

The second mechanism proposed by Espeland and Sauder (2007) is 'self-fulfilling prophecies', which was originally proposed by Merton (1968 p. 477) as 'a *false* definition of the situation evoking a new behaviour which makes the originally false definition of the situation come *true*' (cited in Espeland & Sauder, 2007 p. 11, italics in original). According to the authors, the self-fulfilling prophecies of social measurements operate by encouraging reactions among people that conform to the expectations or predictions embedded in the measurement. These reactions, in turn, validate the measurements' underpinning suppositions. Put differently, self-fulfilling prophecies encourage those who are measured to become more like that which is purportedly measured. For example, academics who are measured and judged on the number of publications they achieve in high ranked journals turn into list-fetishizers, who care more about making the list than making a difference (Willmott, 2011).

For self-fulfilling prophecies to work, two conditions seem to be implied. First, those who are measured need to care about the measurement and its results. Some studies, such as that by Elstad (2009) along with McGivern and Fischer (2012), have shown that certain measurements can be incredibly impactful for those who are measured and provoke quite extreme emotional responses. However, others, such as Dorn (2019), have pointed out how actors can also ignore or reject ostensibly important measurements. While Power (2015) has maintained, rightly

so, I think, that actors may have to pay a steep price for resisting measurements, he has also urged scholars to avoid deterministic notions of performance information and show how non-compliance and resistance are possible. Second, for measurements to be impactful, they not only need to be meaningful to those who are measured but, perhaps more importantly, also to the audiences who view and evaluate the results. For example, an important reason for why hospital rankings may matter less to patients (Dorn, 2019) compared to university rankings for students (Espeland & Sauder, 2007) could be attributed to how much these audiences care about the rankings. In other words, for measurements to cause reactivity among those who are measured, it seems reasonable that time and effort need to be put in to making these measurements important to the intended audience. Similar to what Mennicken and Espeland (2019) have proposed, it seems to me that there is a need for more studies focusing on how numbers make people feel and how these feelings make them react to the numbers.

Ways of reacting to the numbers

A variety of studies have proposed different forms of reactivity. Although the forms described by these authors differ, many of them follow a similar logic by which some salient number causes the actors in the setting to react to the number (e.g. Hazelkorn, 2008; McGivern & Fischer, 2012; Sauder & Espeland, 2009; Willmott, 2011). Often, these numbers are proposed or assumed to be so strong that actors simply cannot choose but to comply with them. For example, Sauder and Espeland (2009) maintain that rankings of law schools in the US changed the perceptions of legal education by acting through coercive and seductive means. Essentially, the rankings produced anxiety and allure for the organisational members who had to put in lots of effort to manage the rankings or mitigate their effects through 'tight coupling' between the rankings and organisational activities. That is, the meticulous attention paid to the rankings 'encourages organizational members to internalize the control that rankings elicit and reinterpret their work, their organizational identity, and their relations with peers' (p. 71). The authors suggest that the importance attributed to the rankings, along with the nitty gritty aspects of people's everyday work being covered by the rankings, disallowed actors to decouple from them – working as before while pretending to comply on the surface – or to game them by manipulating the numbers. These measurements had, in other words, permeated the actors' everyday work activities to the point where the actors could no longer ward themselves off from them. It may be

possible that some numbers are too powerful to be escaped, or so seductive that they are irresistible to those who are exposed to them.

While studies have found that measurements can produce powerful social effects, the numbers do not do so by themselves but through complex and often messy social interactions between people, numbers, and organisational practices (Sauder & Espeland, 2006). For example, in a comparative ethnographic study conducted at three Dutch hospitals, Wallenburg et al. (2016) found that rankings turned these hospitals into 'governable entities'. In essence, the rankings sparked institutional transformations in these hospitals by shaping the institutional work conducted by social actors, which, in turn, were mediated by institutionalised practices of performance measurement and accounting. Still, the authors found that the rankings propelled the hospitals into activities aimed at standardising, simplifying, and quantifying performance information that made clinical work accessible and manageable for managers and administrators. However, the authors also found that the rankings were 'considered irrelevant, inescapable, and influential at the same time' (p. 648). As a result, the rankings triggered both hospital managers and professionals to 'make the best of it' by selecting and emphasising certain aspects of the rankings for their own advancement and benefit. The way I see it, their study suggests that certain numbers may derive their influence from the messiness and ambiguities of their production and use, rather than from being clear-cut and authoritative from the get-go. Contrary to the idea that numbers are too mighty for actors to break away from, it may be weak numbers that tempt actors to react to them.

Something that is often obscured by studies that take a more 'macro' or 'meta' level perspective is the work that goes into making the numbers compelling to the social actors who are exposed, or for them to turn the numbers into feeble things (e.g. Sharkey & Bromley, 2015). For example, when studying rankings of management departments at universities in South Korea, Chun and Sauder (2022) found that an increase in the number of expert staff dedicated to rankings enabled management departments to challenge existing work routines and install new organisational practices. These ranking numbers did not produce organisational changes with a magical wave of the wand, but through significant day-to-day efforts by trained staff who strategically inserted themselves and their measurements into other parts of the organisation and altered the nature of other relationships and interdependencies within the organisation. In other words, powerful numbers require a lot of work that may be taken for granted unless due

attention is paid to what goes on at the level of everyday work and action (cf. Wallenburg et al., 2016).

Measurements like rankings do not just produce conformity but evoke an array of different reactions. For example, Boedker et al. (2020) studied a ranking device used by an Australian bulk water delivery business in the company's attempts to raise interest in workplace productivity among its staff. However, those working at the company used the ranking system against the management team that had installed it. The authors propose that the reason the ranking system was unsuccessful (or successful as a tool available to employees to resist and counter-act management initiatives) was two-fold. First, the ranking system was incomplete and did not include many things that staff members considered important for their everyday work. Second, the ranking system was an internal system and thus lacked external scrutiny, or publicness, which cultivates anxiety among those who are measured (cf. Espeland & Sauder, 2016). Studies on what conditions are needed for actors to resist, ignore, or counter-act numbers like these are still few, but some are discussed below, and the study at hand also contributes to this rather thin body of works (cf. Fırtın & Karlsson, 2020).

Many times, it is not just one measurement or ranking in place within an organisation, but several that may be conflicting or competing. For example, in their ethnographic study on enterprising solutions at an IT company and the role that multiple rankings played in it, Pollock et al. (2018) proposed that organisations no longer conform to dominant measurements but are instead 'transformed' by them. The authors suggest that transforming is different from conforming because the actors who respond to multiple rankings do so by 'constructing and elaborating new forms of expertise, knowledge and connection with rankers' (p. 55, cf. Chun & Sauder, 2022). The actors were found to do so through two actions. The first action was through 'navigation', which meant that the actors sought out 'obligatory points of passage' in the rankings that they had to strive towards or pay attention to, and which parts of the ranking – or parts of them – could be ignored or easily dealt with. The second action was various ways of 're-negotiating' the rankings, such as negotiating the ranker's perception of the ranked organisation, or assessing the rankers and determining if they were significant enough to be considered. It is an open question of what it takes for actors to 'talk back' to the ranking numbers in ways that may alter the meaning and significance of the ranking numbers, rather than the opposite.

One way to react by talking back to the rankings has been through public statements and marketing. For example, in another study on university rankings

such as the Times Higher Education and the QS Top Universities rankings, Heffernan and Heffernan (2018) proposed that universities can regain some of the power they have lost to the ranking agencies by engaging in 'language games'. In their study, they looked at 159 institutions that they treated as actors capable of responding to the rankings. Essentially, the authors argue that the actors would all (apart from those ranked 1st) create narratives that would allow them to position themselves in more positive or powerful positions than what was suggested by the rankings alone. For example, while being the second highest rated university in the world, Oxford created marketing images that showed the school as being rated 1st in Europe. Lund University, while being in seventy-third place, positioned themselves as being the highest ranked in Sweden, as well as by including all universities in the world, rather than only those that had been ranked. The University of Wollongong, at the time positioned at 218th, emphasised their jump in 25 positions from the previous year. This study points towards the possibility for actors to resist or take control of measurements by altering the meanings that are attributed to the numbers, rather than gaming them. However, it is less clear what happens when the measurements are not public, and what about actors who are unable to wield and deploy the resources available to an entire organisation.

In a study on reactivity to measurements in healthcare, McGivern and Fischer (2012) explored how doctors, psychotherapists, and counsellors in the UK reacted to regulatory transparency. They found that the measurements these professionals were exposed to, aimed at making their work practices more transparent, instead disrupted their practices and made them defensive. That is, the professionals they studied experienced these measurements as deeply worrisome. This was often a result of local stories and personal accounts that circulated among these groups about the dangers and consequences of being hung out, named, and shamed in the tabloids or within one's community (cf. Elstad, 2009). So, the authors maintain "rather than focusing doctors' attention on providing better patient care, as regulators presumably intended, such anxieties heightened the doctor's awareness of the need for 'defensive practice'" (p. 292). In practice, many professionals reacted either by playing the numbers game, such as over-prescribing treatments they did not consider necessary but which produced good looking figures, or sheltering themselves from potential trouble by keeping two sets of notes from their clinical encounters: one for public and legal use, and one for themselves and their practice. It remains an open question if such defensive practices are only available to professional groups who still maintain significant

discretion over their own work practices or if these extend to those who lack such leeway.

In another study on hospital rankings, Dorn (2019) challenged the idea that actors, once a salient indicator such as a ranking has been put in place, will change their ways and conform to what the measurement demands of them. Instead, he paid particular attention to the involved actors' sensemaking processes at the level of everyday action and decision-making. By examining cases of hospital rankings in the US, he found that actors, such as patients, medical professionals, and hospital spokespersons, reacted to the rankings through different forms of resistance, for instance, ignorance or rejection. For example, rather than embracing the market-customer logic entailed by hospital rankings that are addressed to patients under the guise of 'shop for the best', patients used other criteria such as their own feelings and judgement to make their decisions, thus rendering the rankings unimportant to them. In other words, the hospital rankings were not meaningful for the patients' decision-making. Regarding the healthcare professionals, Dorn (2019) maintains that they still comprise a sufficiently powerful profession whose work allows them to resist context-insensitive measurements. At a hospital level, in a way similar to Pollock et al. (2018) and Heffernan and Heffernan (2018), he proposes that hospitals have a multitude of rankings and certifications to choose from that allow them plenty of leeway to negate the reputational risks associated with scoring low on one key indicator. This is because they can cite many different and often contradictory performance indicators as evidence of their high performance. While Dorn's study has shown the importance of studying individuals' reactions to numbers at the level of day-to-day sense-making, our knowledge about the conditions under which actors can resist and ignore measurements is still limited.

Sometimes, measurements cause different kinds of reactions because the involved actors do not know how to react to them. Rahman (2021) studied how gig actors reacted to third-party opaque evaluations used by existing and prospecting clients of freelancing services. The opaqueness of the measurements meant that the actors could not know what they would be evaluated on, or how they were being evaluated. The idea behind making the measurement opaque was to prevent so called 'gaming' strategies from being deployed by those who were measured. In that sense, Rahman's study offers an example of when reactivity is seen as something to be warded off, rather than embraced. In that sense, his study departs from a kind of reactivity he refers to as *convergent reactivity,* which is a loose term that reflects a kind of institutional imitation much akin to the core tenets of

institutional theory and the idea of 'isomorphism' (DiMaggio & Powell, 1983; cf. Meyer & Rowan, 1977; see also Willmott, 2011). Essentially, in their pursuits of legitimacy and audience recognition, convergent reactivity holds that actors will align with and respond to quantified criteria used by third-party evaluations in ways similar to one another (Rahman, 2021). Contrary to this way of reacting to the measurements, he found two different forms of reacting. The first way was by *constrained reactivity.* Essentially, those actors who reacted in this way tried to limit their exposure to the measurements by making attempts to ensure that their activities would not be recorded and subjected to evaluation. A second group of reactionaries also formed. These actors engaged in *experimental reactivity.* That is, rather than limiting their exposure, they tried to increase their scores by testing different strategies to see what had a positive effect on their scores. Taken together, Rahman's study suggests that there are many ways for actors to react to measurements and importantly that, even if actors wish to conform to the measurements, it can sometimes be far from obvious to these actors just what is expected of them.

What is Left to Know?

How numbers work in an organisation is not uncharted territory, but rather a research area with significant tensions and outstanding questions. In this final part of the chapter, I outline what I believe to be the most pressing issues to examine, along with the calls made by other scholars, which I have heeded. The study at hand does not set out to answer all these questions once and for all. It does, however, set out to address them and contribute to them, thereby suggesting new ways of understanding how numbers work within organisations and how actors react to them – or not.

We need to know more about how numbers perform in organisations. As pointed out elsewhere in this chapter, the performativity of numbers is often taken as a given, but scholars such as Boedker et al. (2020) and Dorn (2019) have suggested that numbers and ranking systems are not inherently performative. They urge scholars to examine the conditions under which numbers can indeed be made performative. Dorn (2019) urges researchers to investigate 'the conditions under which measures prove inescapable and substantially influence sensemaking' (p. 330). Hence, when they first launched the concept of reactivity, Espeland and Sauder (2007) proposed it as a "*capacity* to change" people and institutions (p. 33,

my italics). Since then, what started out as a capacity to change has evolved into an inevitable outcome. Yet, Dorn (2019) asserts that 'reactivity depends on the resonance of the measure in the sensemaking processes of the relevant actors and the evaluative structures of the field' (p. 342). What he is pointing towards is a set of criteria which, if met, will cause people to react to a measurement – or be able to reject or sidestep it (cf. Fırtın & Karlsson, 2020 p. 174). In other words, under what conditions will a measurement resonate with people? Who are the 'relevant actors' and what makes them so? And what constitutes the 'evaluative structures' of a field? He further suggests that 'once an actor treats the ranking as important and unavoidable, it will become just so for this actor' (p. 331). Perhaps, but what about if the situation is reversed? If an actor treats a ranking, or a measurement, as unimportant and ignorable, does it really make it so? In other words, under what conditions can numbers be made performative?

Where lies the power of numbers? For organisational actors, there is an array of different and possible reactions to numbers. For example, Power's (2015) has called for increased attention to be paid to non-deterministic aspects of performance information and how 'noncompliance' and 'resistance' are always possible. A fairly recent literature review on rankings suggests that our knowledge of the actual reactions of ranked individuals and organisations, along with the possibility for these actors to ignore or resist the rankings, are still limited (Rindova et al., 2018). Yet, studies on these aspects of numbers are still relatively few, and those that do exist reveal outstanding questions (e.g. Boedker et al., 2020; Dorn, 2019). Is it possible to reconcile the seemingly opposing viewpoints that numbers may both conjure up powerful forces that leave actors with no choice but to conform to them, and that social actors can resist, counter-act, alter, or ignore the numbers? One way, it seems, is to challenge the prevailing notion that numbers pass from the top of an organisation downwards and cause effects at lower levels, to also consider how actors may change the numbers from the 'bottom' upwards. In ways similar to those found by Wallenburg et al. (2016), seemingly powerful numbers may not begin as such but become so after being embraced and nurtured by organisational actors who 'make the best of it' (cf. Ahrens & Chapman, 2007). So, what options, or agential leeway, is available to the organisational actors in reacting to and altering the numbers?

Increased attention has been called for regarding how actors react to numbers at the level of everyday actions. Numbers may work because of how people react to them, and how they interact with or through them, not in spite of it. Yet the ways in which rankings and underlying indicators actually interact with organisational

practices have received fairly little attention by scholars (Wallenburg et al., 2016). Although most studies have focused on some particular context, such as a university or a hospital, there is a tendency to seek out organisational responses to measurements – in sharp contrast to the original idea that it is individuals, not organisations, who react to being measured (Espeland & Sauder, 2007). Such positions are insensitive to differences within organisations and to many of the actual day-to-day struggles faced by people who make up such organisations. For example, Pollock et al. (2018) conclude their study by saying that "a key insight from our study is that organisations no longer simply conform to dominant measures but are instead 'transformed' by them" (p. 65). This sweeping statement seems to imply that organisations have now entered a new era, while also revealing an ontological perspective that considers 'organisations as actors' (cf. Bromley & Sharkey, 2017). Such viewpoints suggest that it is organisations such as hospitals or law schools that are being subjected to and responding to the measurements, rather than the flesh and blood individuals who make up these organisations, whose social worlds may be turned upside down by the numbers (McGivern & Fischer, 2012), or whose lives may remain unaffected by them (Dorn, 2019). There is still significant room for studies that provide detailed accounts of how numbers may be able to alter people's social worlds and how they, in turn, may respond to such numbers. Indeed, as implied by Dorn (2019), without a focus on individual action and sensemaking, reactions to measurements become aggregated at an organisational level, which risks obfuscating alternatives, resistance, and even failure. In sum, how do numbers work at the level of everyday action and interaction?

There is a pressing need for an increased sensitivity to 'contextual' factors. It is important to define research contexts, which encompass a particular time, geographical location, and social settings. These settings are also inhabited by people of different (or similar) professional and occupational groups, genders, and ages, as well as cultural, social, and educational backgrounds. However, even within specific contexts, such as hospitals, with supposedly closely-knit professional groups – say nurses – there may be significant differences between these actors about what they see as important and aspirational (cf. Blomgren, 2003). In other words, even at a so-called "micro-level", there is room for significant differences within groups that may be presumed to be homogenous and whose responses may be assumed to be similar. For example, within the same context, actors may react quite differently to their environment and to the numbers they are exposed to (e.g. Dorn, 2019; Rahman, 2021; Wallenburg et al., 2016). However, Dorn (2019) concludes by suggesting that 'hospitals have a

broader behavioural repertoire and do not have to resort to conformity or manipulation but may rather resolutely oppose a performance measure' (p. 342). The important question is perhaps not whether hospitals can oppose performance measures or rankings, but rather, who has the power to make certain measurements matter while ignoring others? How does a particular context, such as a hospital, influence how actors are able to react to the numbers, and how can actors' social roles and status be used to wield ostensibly objective numbers? In other words, who can do what with the numbers?

The reflexive interplay between people and numbers remains a fruitful area of study. The understanding that reactivity to numbers is an ongoing reflexive activity is nothing new, having been cultivated already by Espeland and Sauder (2007). Yet, few studies seem to have embraced the implications of such reflexivity. As I have pointed out in this chapter, the dominant reactivity thesis seems to be that salient measurements prompt actors to conform to them (Dorn, 2019; Pollock et al., 2018; cf. Rahman, 2021). However, a few studies have gone beyond reactions such as conforming, resisting, or ignoring the numbers, to also explore if and how the meanings and significance of the numbers may be altered over time, and perhaps spawn new beasts entirely. For example, drawing on Wallenburg et al. (2016), it may not always be the numbers that seem most 'powerful' that turn out to be so; instead, it may be those that seem 'weak' that allow actors to alter the numbers in ways that make these influential over time, or that allow actors to wield the numbers in entirely different ways (e.g. Boedker et al., 2020). That is to say that seemingly 'weak' or 'strong' numbers are the result of how actors reflexively use and relate to them over time. There is still much more to say about how, and under what conditions, numbers and social actors can mutually shape each other?

Summary

This has been a long chapter. What is more, I suspect that the term "literature review" may be a bit misleading at times. Sometimes, the review aspect is downplayed, in favour of more thorough and extensive accumulations of texts – thereby putting the emphasis on *literature*. Other times, fewer texts are mobilised but carefully scrutinised to shift the emphasis to the *review* aspect of the literature review. In this chapter, I have chosen to stay as close as possible to the running argument of this thesis by discussing ways of seeing the numbers, ways that people

use numbers, things that numbers do, and how people can react to the numbers. I have also suggested outstanding issues that I have argued to be aspects of numbers in organisational life that still call for further study. Of course, there would have been many alternative ways to frame this review, thereby giving voice or a stage to some ideas that have either been downplayed or left out in this chapter. At the same time, what this suggests to me is that this is a topic on which there will always be more to say. And so, perhaps, this chapter can be seen more as a conversation, than as a review, and if so, the conversation has just started.

CHAPTER 3
THEORY

Introduction

Within the social sciences, what theory is and what theory does is a contentious matter (e.g. Abend, 2008; Sutton & Staw, 1995; Weick, 1995). However, a commonly held idea has been that in order for theory to be meaningful – or for it to be considered theory at all – it should take the form of a law or rule that explains and predicts some social phenomena and, ideally, it should do so in a way that is generalisable (cf. Abend, 2008). The stricter and more universal the rule, the better it is. The end result of this kind of theorising tends to be what Mills (1959) calls 'grand theory', a typically abstract and universal explanation of social activity that is decoupled from time, space, and everyday life. This ideal of a grand theory, which has been so cherished and successful within the natural sciences, is arguably both unattainable and undesirable within the social sciences (cf. Giddens, 1984). Such rules must necessarily formalise under conditions of stability and determinism, whereas social reality, on the contrary, seems to be more adequately described as being in a perpetual state of change, choice, and reflexivity (Giddens, 1976). The point of theory in the social sciences, as I see it, is not to provide a set of fixed explanations or to predict actions and outcomes, but to provoke thought, reflexivity, and alternative ways of being and acting in the world. Again, one of the main issues with prevailing thoughts on numerical performativity is their tendency to assume the form of such a grand theory. Thus, an important implication of this chapter is to bring numbers and their performativity back into the realm of everyday life.

In everyday communication, numbers can be thought of as having two roles. One is for numbers to do things, such as to generate, shape, or impede certain ways for people to see, be, and act in the world. The other is for numbers to be used by people as they attempt to define situations or manage the impressions of an audience. This thesis is about the reciprocal interplay between these two roles (cf.

Fauré et al., 2019). In a particular sense, this interplay ties into what has been referred to as reactivity. The fact that people react to numbers presupposes that numbers do something. Put differently, people need something to react to. The notion that numbers do something has been referred to by many different names, but most such reasoning branches from the concept of *performativity,* which stems from Austin's (1962) work on how words can be used in ordinary language (cf. Espeland & Stevens, 2008). The ways in which people can do things with numbers often tie in to Goffman's (1959, 1974) works on how people come to understand and define the social situations they are in, as well as how they communicate with others by putting on *performances* (e.g. Lorino et al., 2017; Pentland, 1993; Vollmer, 2007; Åhblom, 2017). This chapter deals with the performativity of numbers and performances with numbers.

In this chapter, I use key studies on the performativity of numbers to *problematise* certain assumptions about the two roles of numbers in communicative acts. The key problem to solve is not just how people may react to numbers, or what effects are engendered because of such reactions, but under what conditions numbers can perform and how performances with numbers can be deployed by people in ways that are accepted by their audience. In other words, the ways in which people can perform themselves to escape or reject the numbers. Therefore, I will not offer an extensive review of performativity or performances with numbers. In fact, Yu and Huber (2023) recently reviewed how the concept of performativity has been used in accounting studies and found that many studies (almost 70% by their count) glossed over any form of deeper engagement with the concept of performativity. Moreover, they and I agree on the need to study the performative formation of alternative worlds, and not just how performativity, as they put it, either engenders conformity or amplifies effects. It is, however, important to note that this study is not concerned with accounting *per se,* but with numbers (including accounting numbers). Thus, I will return to and draw upon some of the original and broader applications of these theories to advance my problematisation and, in doing so, develop the theoretical framework required to address unresolved issues regarding numerical performativity. In other words, this chapter is about *putting theory to use*.

According to Alvesson and Sandberg (2011), it is well established that the so-called practice of 'gap-spotting' tends to reinforce and under-problematise existing literature and influential theories. They suggest many ways to problematise assumptions within a particular scientific field, but the approach that I have taken is most akin to what they refer to as identifying *in-house assumptions*. According

to the authors, these assumptions are shared and accepted as unproblematic among advocates of a particular school of thought (p. 254). To be clear, the studies that I draw upon in this chapter are intriguing, offering insightful and important findings. It is not my intention to suggest that their findings are somehow corrupt or mistaken. Rather, I want to suggest that certain under-developed assumptions reveal important avenues that can be explored. This chapter sets out to identify these avenues and suggest ways to approach them.

The study at hand draws extensively on a 'root metaphor' of social organising and everyday life as being akin to drama and theatre. This means that, just like any study, this thesis has seen and treated certain aspects of the world and certain kinds of research about it, as more important and others as less important (cf. Morgan, 1980). My position largely follows from the argument put forth by Perinbanayagam (1974):

> A sociological argument is possible only with at least a weak form of the dramatistic argument: but for drama, there will not be any communication, and without communication there cannot be interaction; and without interaction, there can be no social fact or social structure; and without social facts and social structure, there is no such thing as the sociological argument (p. 536).

The root metaphor of social life as analogous to drama and theatre stems from the works of Burke (e.g. 1945, 1989) and Goffman (e.g. 1959, 1963). Sometimes, a sharp distinction is made between their views on the ontology of social life. That is, if social life *really is* drama and that all the world is a stage. Or, if such a view is just a metaphor and that social life is just *like* a theatre (Boje, Luhman, & Cunliffe, 2003). Broadly speaking, Burke saw drama or dramatisation as something happening inside the minds of people, whereas Goffman treated drama as a way for individuals to externalise their selves and their thoughts (cf. Prasad, 2015). This thesis subscribes to the latter notion. In other words, the root metaphor used in this book has been to treat organisational life *as if* it were a theatre and organisational members – or participants of social situations – as actors who play different roles and put on various performances (Goffman, 1959; Morgan, 1980). In company with Perinbanayagam (1974), I have treated dramatisation as a genuine way for people to communicate with others, rather than as just a way to manipulate or exploit others – although this may, of course, happen.

Yu and Huber (2023) have urged researchers to incorporate additional theories into the extant performativity thesis to encourage a richer framework-building.

Several research streams have branched off from Austin's (1962) landmark study, which launched performativity as a theory of ordinary language use (for a review of organisation studies see Gond, Cabantous, Harding, & Learmonth, 2016; for social science more broadly, see Loxley, 2006). The most salient perspective in management studies seems to be Callon (e.g. 1998, 2007, 2010) and MacKenzie's (2008) 'performativity thesis', or "Callonistics" (for an overview, critique, and defense, see Vosselman, 2014). In this study, I have instead chosen to engage directly with Austin's original thesis and developed Espeland and Stevens' (2008) 'working premises' for a performativity of numbers. In brief, my view is that the focus and imagery of Callonistics differ from my own perspective in an incommensurable way, but that the topical interest and underlying ambition found in the basic idea of performativity nonetheless bring our perspectives together. Mackenzie (2008), for example, was clear about severing his ties to Austin (cf. p. 19), a move that made perfect sense given Mackenzie's interest in large systems such as financial models and theories. Conversely, in this thesis, the focus is on the level of everyday social interaction, where Austin's work is, at least at the outset, more applicable. Moreover, the imagery used by Callonistics tends to be composed of the root metaphor of a network (cf. Latour, 1990) with additional metaphors such as nodes, entanglements, disentanglements, frames, and overflows (Callon, 2007, 2010), as well as the chains and trails that are sought out and described by scholars (Justesen & Mouritsen, 2011). What I am concerned with, however, is the social processes through which actors accomplish numerical performativity. For this purpose, I contend that the imagery of theatre does a better job of accounting for the performativity of numbers than the image of a network.

Although Judith Butler (albeit unwillingly) and others (e.g. Parker & Sedgwick, 2013) have embraced theatre, or performance, in their use of performativity, most post-Austin studies have adopted a 'machine-like' conception of performativity. In this view, speech-acts function in an automatic manner that is, by and large, foreseeable, standardised, and repeatable (Loxley, 2006). Callonistics tend to show how some overarching theory or practice – such as markets, economies, or accounting – shapes or creates the realities they are professed to describe (Callon, 2007). For example, they challenge mainstream functionalist views on accounting with constructionist notions (Vosselman, 2014). I agree with Callon's (2007) view that the success of a performative statement is never given in advance and that 'the success (or failure) of an act of language becomes clear only at the end of the test to which it is put, through the cooperation it triggers, the opposition and controversies that it generates' (p. 330). However, my view is that such a position

clouds the means that actors may lay claim to for challenging or rejecting such a performative enterprise at its inception. Hence, if it is only possible to know if a 'new world' (Callon, 2007; cf. Loxley, 2006) has been conjured *ex post facto,* then the means available to actors to reject or refuse such a world before they are engulfed by it are effectively offset. At the same time, strict conditions for performativity imply that if these conditions are met, a new world will emerge as if bound by some natural law. It is this paradox that I believe my position is better equipped to reconcile, at least in relation to the object of study in this thesis (cf. Gond et al., 2016 p. 457 ff.), namely numerical performativity at the level of everyday social interaction. It is towards these aspects that I now turn.

The rest of this chapter comprises two parts. First, performativity, then performances. At the end of the chapter, I summarise my theoretical position.

The Performative Potential of Numbers

To speak of the performativity of numbers can be misleading because it may imply that numbers themselves *are* performative. Performativity has an impressive lineage and has been widely used within the social sciences – but it has also been frequently misused and under-used in studies (Gond et al., 2016). For example, questions about when something is performative, when performativity fails, who can make something performative and who cannot, the role of the setting, and so on are at best treated as empirical context and at worst ignored entirely. I, therefore, propose the term '*performative potential'* to problematise and elucidate some key studies on the performativity of numbers (cf. Hesselbo, 2023).

I will problematise the performativity of numbers by paying careful attention to a few important studies. These studies are important in different ways – ways that I will point out as I analyse each study. Their main point of departure is that one stream deals with accounting numbers (Boedker et al., 2020; Fauré et al., 2010; Fauré et al., 2019; Vollmer, 2007) and the other with numbers and quantification more broadly (Espeland & Stevens, 2008) – or specifically, with healthcare practices at a micro-level (Essen & Oborn, 2017). I address these studies by relating them to key concepts of performativity, mainly as proposed by Austin (1962). In doing so, I will tease out three outstanding questions. First, what does it mean to say that numbers are performative? Second, under which conditions can numbers be performative? Third, in what ways can numbers be performative?

The performativity of numbers

Espeland and Stevens (2008) developed a clear and convincing connection between numbers as a constitutive feature of modern society and Austin's (1962) pivotal insights on ordinary language in his seminal lecture series on *how to do things with words*. The authors made a convincing case that Austin's theory could also be applied to numbers. At the same time, it is important to consider that the author's main argument was about launching an ethics of numbers, whereby the performativity of numbers served as a means to that end. It is, therefore, understandable that they merely offered some 'working premises' for analysing quantification by 'borrowing loosely' from Austin's work (cf. Espeland & Stevens, 2008 p. 403). Their essay is splendid and insightful, but the working premises they launch deserve to be sharpened and developed. One way to do so, it seems to me, is through an increased engagement with certain key ideas posited by Austin (1962, 1979). Besides making the connection to Austin's work, Espeland and Stevens (2008) made important contributions to the understanding of the performativity of numbers by relating three types of performatives acts, *locution, illocution,* and *perlocution*, to the realm of numbers.

Locution, they propose, involves using numbers to present statements of facts and to establish or attribute a certain meaning to those numbers. Numbers used to form statements of facts, make descriptions, or assert a particular viewpoint are locutionary acts. To establish a certain meaning, these kinds of numbers rely on a broadly shared 'grammar' or 'vocabulary', such as numeracy, statistical rules, mathematics, and methodological standards (cf. Chua, 1996; Espeland and stevens, 2008). Locutionary acts rely on, and make use of, conventional ways of producing, expressing, and interpreting numbers (Espeland & Stevens, 2008). It is through locutionary acts that numbers are *made* meaningful within particular contexts (cf. Vollmer, 2007). A generous reading of 'particular contexts' suggests that the individuals who use the numbers, or relate to them, are also important. In other words, locutionary acts depend on the roles or social status of those who perform them, or are the audience for them (cf. Austin, 1962).

Illocutionary acts have a 'pragmatic force' and secure what Austin (1962) calls 'uptake'. Espeland and Stevens (2008) point out that 'numbers often *help constitute* the things they measure by *directing attention*, *persuading*, and *creating* new categories for apprehending the world' (p. 404, my italics). There are two issues here that deserve to be unpacked. First, notice how numbers are subtly afforded agential properties – they 'help', 'direct', 'persuade', and 'create'. The question then becomes what, or whom, is doing what. For example, is it the

number that is engaged in an act of persuasion, or the person who uses the number in an act of persuasion? The difference is important because it risks negating the important point that the authors, and Austin, were trying to make, namely, that 'context' and 'performance' are key conditions for performativity. If numbers are somehow imbued with qualities that allow them to act on their own, does it not matter who puts them to use, or who serves as their audience? Second, the claim that numbers 'often' do these things implies that they at least occasionally fail; why is that?

Perlocution is more intricate. This is because perlocution entails the changes or effects that are conjured by using a particular number in an illocutionary act (Espeland & Stevens, 2008). Austin's (1962) position on perlocution was that:

> Saying something will often, or even normally, produce certain consequential effects upon the feelings, thoughts, or actions of the audience, or of the speaker, or of other persons: and it may be done with the design, intention, or purpose of producing them; and we may then say, thinking of this, that the speaker has performed an act in the nomenclature of which reference is made either […] only obliquely, or even […] not at all, to the performance of the locutionary or illocutionary act (Austin, 1962 p. 101).

In other words, while saying something will often produce an intended effect – which can be intended due to its place within a set of social conventions and linguistic nomenclature – saying something may also produce effects that are partially, or wholly, outside of its design or purpose – in Callon's terms, they are 'overflowing' (Callon, 2010). The term *perlocutionary force* is fruitful for considering how an utterance can produce an effect, or even a chain of effects, which can be traced back as a consequence of making that utterance (cf. Loxley, 2006 p. 129).

An issue with Austin's concept of perlocution is that it implies a view akin to the so-called 'transmissions view' of communication. In short, this view posits that communication is a process that involves a sender, a receiver, and a message. The communicative act, in turn, consists of clear-cut processes that depend on the intention and skill of the sender to avoid factors that may otherwise distort the message, such as 'noise' (Axley, 1984). The message is reduced to a conduit, and the receiver is portrayed as a passive recipient instead of an active participant capable of creating, rather than receiving, meanings (Reddy, 1979). In Austin's terms, communication errors ought to be seen as infelicities. Or, in other words, as the sender failing to meet certain *felicity conditions*. For the receiver, errors or 'noise' can be seen as their inability to understand and relate to conventional

procedures. The problem with a transmissions view in studies about performativity is that they easily fall prey to a form of social determinism. For example, locution might be treated as conveying a *specific meaning*, illocution as generating a *certain force,* and perlocution as producing a *particular effect*. My contention is that more can be done in terms of *how* numbers are made performative in communicative acts.

Building blocks for a performativity of numbers

What are the building blocks for a performativity of numbers? Under what conditions, specific and local, as well as global and general, can numbers perform? Espeland and Stevens (2008) suggest that 'the work and conventions used to make numbers, and their meaning and consequences, should never be presumed' (p. 406). According to Vollmer (2007), researchers should focus on how numbers acquire meaning and significance in social situations where participants actively relate or express themselves and their actions in front of an audience by using numbers (Vollmer, 2007 cf. p. 597). I would like to suggest that by taking certain aspects of performativity more seriously, we can approach how and in what ways local contexts are important. When and how do numbers fail to be performative, become ignored, or challenged? If numbers constitute social reality, which is the essence of the performativity thesis, then we should not only be interested in what kind of reality is constituted, but also how it is constituted. In other words, what are the materials and techniques used to fashion this or another social world through the numbers?

Both of these problems point towards the same direction, namely, to some form of conditions under which a number can be said to perform an action. Such conditions were offered by Austin (1962, 1979), who, despite claiming that performativity was a simple concept, spent significant time and effort to elaborate it by developing a set of felicity conditions. These are conditions through which a performative utterance can be deemed 'happy' or 'unhappy'. A happy performative is one that meets its felicity conditions and performs its intended function, whereas an unhappy performative fails to do so. Such acts, Austin suggests, are either void or hollow through infelicities. Few studies on numbers have shown a serious engagement with these conditions, or to suggest other conditions. The study that comes closest to doing so, I believe, is Fauré et al. (2010), who studied accounting practices at the level of everyday communication within a construction firm. However, they limited their study to specific utterances as speech and text, which did not include non-verbal communication.

Numbers are different from words, and so a performativity of numbers must, at least in some ways, be different from a performativity of words. At the outset, I am making two significant departures from Austin's performativity. The first departure is that I propose a more developed theoretical framework for the 'performativity of numbers', launched by Espeland and Stevens (2008) as 'working premises'. The second parting from Austin's (1962) performativity, and later Searle's (1969) speech act theory, concerns their attention to saying and communicating something by *uttering* words. The conditions originally proposed by Austin (1962 p. 14 f.) are listed below for reference:

(1) It must be a commonly accepted convention that the uttering of particular words by particular people in particular circumstances will produce a particular effect.

(2) All participants in this conventional procedure must carry out the procedure correctly and competently.

(3) If the convention is that the participants in the procedure must have certain thoughts, feelings, and intentions, then the participants must in fact have those thoughts, feelings, and intentions.

(4) If the convention is that any participant in the procedure binds him/herself to behave subsequently in a certain way, then s/he must in fact behave subsequently in that way.

My contention is that a theory concerning the performativity of numbers needs to extend the range of what is meant by an 'utterance' and what constitutes a 'speech act'. What is needed is an advancement as to what conditions are applicable to a performativity of numbers, when and where are they applicable, and in what ways? To do so, I have synthesised Austin's felicity conditions into two groups: (1) *context* and *performance* along with (2) *sincerity* and *intention.*

Context and performance

Austin (1962) asserts that a successful performative act demands the existence of 'an accepted conventional procedure'. Butler (1990; 1999) stresses the importance of *performing* such procedures. In discussing gender, she argues that gendered bodies are performed by people in 'embodied rituals of everydayness' (1997a) – which is her way of saying that performativity is *more* than language and linguistics by including additional aspects of social existence (cf. Loxley, 2006). In doing so, Butler is not suggesting that our bodies come to exist by us performing them; rather, she suggests that our bodies come to exist in particular (gendered) ways through such performances (cf. Loxley, 2006). In other words, for Butler, social

gender is a way for our bodies to exist in the world, made possible by performing conventional procedures of gender. However, when it comes to numbers, the accepted conventional procedures can be argued to be more dependent on social negotiations on a case-by-case basis (cf. Vollmer, 2007).

In contrast to Austin's original thesis, I propose that a more fruitful approach to understanding the performativity of numbers may be to alter the condition of 'an accepted conventional procedure' to suggest instead that a procedure *must not appear* inappropriate in front of an audience (cf. Porter, 1996). This means that the focus is shifted from aspects that lie outside of the immediate situation 'a conventional procedure', to an immediate assessment that can be made by people in a particular context. In other words, the question of the existence of a *certain* 'accepted conventional procedure' is downplayed in favour of asking if and how the procedure can be made to appear appropriate in front of an audience. What I am thereby suggesting is that the appearance of appropriateness is a social performance and accomplishment. Indeed, Derrida (2000) has suggested something similar by asserting that where performativity ensues, there is 'a context of legitimate, legitimizing, or legitimized convention' (cited in Loxley, 2006 p. 136). Rather than stating that a procedure "must be" appropriate, I am suggesting that procedures should be *made to appear* appropriate.

Next, rather than stating that a procedure must have a 'certain conventional effect', it may be more fruitful to consider a procedure as having a stated or presumed function. My contention is that, in the context of the performativity of numbers, the extent to which any number can be said to have a conventional effect should be treated as an empirical question, rather than as a presumption. Additionally, in line with Callon's (2010) reasoning, it is often the performative acts that fail, or go awry, which are the most interesting and important to study. However, to explore instances when performativity "fails", there is a need for some benchmark against which the act can be assessed. The stated or presumed function of a given number tends to be accessible to those who are an audience to them, or to those who wield them – even though there may be multiple and contested functions at times. Having established the function of a number, we can ask if the number fails or succeeds in performing its stated or presumed function. We can also ask if the number does more, or if it perhaps has a different, unintended, or even hidden function.

Austin (1962) says that a procedure should include 'the uttering of certain words by certain persons in certain circumstances'. For a performativity of numbers, it is important to open up the term 'utterance' to include the various ways in which

numbers may be referred to, or made influential, in a communicative act (Fauré et al., 2010; cf. Fauré et al., 2019). Following Goffman (1983), I suggest that utterances can also be 'non- linguistic acts in wordless contexts' as long as these 'connect acceptably with what [an audience] has in, or can bring to, mind' (p. 50, cf. Callon, 2007 p. 334). This is because there are many ways to use numbers that do not require them to be 'uttered' in social situations. For instance, consider how numbers regularly appear as written texts, rather than as spoken utterances. Nonetheless, even as texts, numbers can be communicated in multiple ways and in widely different aesthetical formats (Espeland & Stevens, 2008). For example, in a handbook on effective ways of communicating numbers, Heath and Starr (2022) suggest that one of the most powerful ways to communicate numbers is by not mentioning any numbers at all. If their premise is accepted, it is possible to infer that there are powerful ways of using number, and that such power is generated without them being 'uttered' or explicitly referred to.

The actor who performs the numbers, and the circumstances in which numerical actions are performed, should be made to appear appropriate to its audience. Put differently, it is important to modify Austin's 'must be', which supposes that persons and circumstances can be inscribed with underlying and essential qualities of appropriateness. Instead, such an appropriateness ought to be treated as a potential social accomplishment, which also opens up the possibility of deceit and mistakes. In other words, the appropriateness attributed to a person or circumstance should be seen as a social accomplishment, rather than as a social fact. For example, a common incident in everyday healthcare settings is for male nurses to be mistaken as doctors, and for female doctors to be assumed as being nurses. When that happens, a social drama may follow, during which an actor may incidentally claim a higher social status than what is normally available to him, or she may be deprived of the social status usually accorded to her.

What does it mean to say that a procedure is correct? The answer is most easily found by suggesting that the procedure should not appear as erroneous or the performer as making mistakes (cf. Austin, 1962 p. 35 f.). For instance, when a person presents calculations that are incorrect or shows 'correct' numbers to the wrong audience. Consider, for example, a consultant who presents incorrect calculations to a client (erroneous) or presents 'correct' numbers to the wrong client (mistake). Hence, there may be many ways to perform numbers 'correctly', but only a few ways to perform them in a mistaken or erroneous way. For a performativity of numbers, it may be more fruitful to look for and be attentive to

situations where mistakes or errors are exposed by an audience – or a performer – rather than to imagine 'correct' ways of performing them *a priori*.

Sincerity and intention

The most contested aspect of performativity concerns the conditions related to intention and sincerity (Loxley, 2006; cf. Moati, 2014). For Austin (1962), a person must in fact have those thoughts or feelings that a procedure is designed for. To him, non-serious language use, such as that of actors in a play or words in a poem, is 'parasitic' on normal language use, acting as 'etiolations' of the language (Austin, 1962 p. 22). In other words, a language act should not be insincerely performed, non-serious, or fictional. However, the question arises: do performers really need to be sincere? I would like to suggest that an actor, rather than having certain thoughts or feelings, instead should be seen by the audience as sincere in having the thoughts or feelings that are being expressed or assumed. An audience will subsequently judge the performer based on the extent to which the performer manages to express the thoughts or feelings that the procedure was designed for (cf. Goffman, 1959). In the context of the performativity of numbers, I suggest that a person should perform those thoughts or feelings that a particular procedure is designed for. For example, a performer may have to restrain personal feelings to appear more objective, detached, or impersonal than he or she 'actually' is (Porter, 1996, 2012). In sum, what is of importance is how a performance can be made 'understandably relevant' to an audience and how they can relate to and understand what is going on (Goffman, 1983 p. 51).

When performativity fails

Austin (1962) proposed two main types of infelicities – failed or 'unhappy' performative acts – *abuses* and *misfires*. Misfires are events where a performer attempts to put on a performance but fails to do so. That is, the performer either makes a mistake or the performance is, for some reason, deemed to be illegitimate, or the performer is taken to be unauthorised. Misfires make a performance void. Abuses, on the other hand, are events where a performer succeeds in meeting the conditions for a successful performance but does not have the proper intentions, thoughts, or feelings associated with performing the act (Loxley, 2006). In these cases, the performance is hollow but not void. For a performativity of numbers, I suggest a position similar to Callon's (2010), who maintained that the success or failure of a performance only becomes clear *ex post facto* and that it should therefore be assessed through 'the cooperation it triggers, the oppositions and

controversies that it generates' (p. 330). For a performativity of numbers, I propose that misfires should be seen as events where a performer, or a performance, is seen as inappropriate, mistaken, or erroneous by its audience. Abuses, on the other hand, comprise situations in which an audience challenges or rejects the claims that a performer makes to having certain thoughts, feelings, or intentions they consider appropriate for such a performance.

To exemplify the value of a more developed framework for understanding the performativity of numbers, I will examine the study that has made the most explicit claim to a theory on the performativity of numbers. In their insightful study on illness management, Essen and Oborn (2017) drew loosely on the performativity of numbers to explore how medical professionals and patients used and responded to medical numbers. Among their findings, two stand out as particularly intriguing. First, the authors found that medical numbers, contrary to being trusted (cf. Porter, 1996), were instead frequently 'distrusted' by physicians. The authors claim that "all physicians emphasised the need to combine and *corroborate several numerical values* and their *own assessment* to establish whether the numerical values could be 'trusted'" (p. 138, my italics).

Such a 'distrust' in numbers is an interesting claim. What is more, it is a claim that can be fruitfully examined through a deeper engagement with the performativity of numbers. For example, were the numbers distrusted? Perhaps. However, an alternative interpretation is that the physicians deployed performances that problematised the numbers in order for them to appear as being in control of the numbers. That is, if the numbers were deemed untrustworthy without the corroboration of several numerical values along with the doctor's own assessment, then how could a patient be expected to successfully wield them? Do they have access to the conditions needed to 'trust' the numbers? Do they have the legitimacy required for making 'their own assessment'? Most likely, they do not. Thus, the physician's assertions may also be viewed as performances aimed at maintaining their professional discretion and superiority. The fact that the numbers were still heavily relied upon in the patient-doctor interactions highlights who was authorised to wield the numbers, and who were not.

Second, the authors claim that medical numbers "gained authority as they established new possibilities for communication by providing a shared language and a 'new' resource that both patients and physicians had the right to utilise" (p. 142). From a performative standpoint, did the numbers act as a 'shared language' and were the patients authorised to wield the numbers? I have doubts about this claim. For example, the patients' use of the numbers could also be considered as

infelicitous, more precisely, as misfires. That is, their attempts at performance could be seen as void because the performers, the patients, were unauthorised – they were not able to 'corroborate several numerical values' or make 'their own [professional] assessment'. Consequently, by their own logic, the physicians as the audience should reject the performance because the numbers should not be trusted. It would follow that the language constituted by the numbers would not be a 'shared' one, but rather indicative of a particular one-sided social world and way of communicating. What seems to be missing is the conditions under which the number could act as a 'shared language' (cf. Levay et al., 2020 p. 472 f.).

A distinction between locutionary, illocutionary, and perlocutionary acts would be fruitful to unpack the claim of a shared language. As a locutionary act, the number seemed to establish a particular meaning determined by the physicians who deployed it. This meaning was intact and authoritative, even in the patient's use of the number. That is, alternative meanings, such as those not measured, could be, and were often disregarded as outside of the physicians' responsibilities. Rather than acting as a shared language – which I regard as an ability for both parties to express and communicate their thoughts or feelings – the number operated as a locutionary act that produced a particular meaning while dismissing other meanings. However, the numbers also seemed to be used by both participants in illocutionary acts. While doctors used the numbers to justify or inform certain decisions and actions, patients could use the numbers to challenge their physicians' actions and decisions.

There were also indications of perlocutionary acts. For example, the authors mention how patients "tried to make connections between 'bad' numbers and their own lifestyle and everyday activities" (p. 139). The authors dismissed these attempts because they were not measured and, therefore, no connection could be made between the measured and unmeasured dimensions. I suspect that the authors overlooked an important aspect here. Specifically, the perlocutionary effect of the numbers, which prompted patients to search for a connection between the numbers and their everyday life activities to begin with.

Another important study is by Boedker et al. (2020), who studied the so-called 'counter-performativity' of a ranking system (cf. MacKenzie, 2008). Contrary to the dominant performativity thesis, which suggests that actors comply with the numbers, they found that the rankings were taken out of the hands of management and used against them. The authors suggest that one reason why the rankings failed to instil the desired change and momentum in staff members was that they 'saw [the efforts of management] as pretence and front-stage, not as real'

(p. 17). The authors argue that counter-performativity ensued because management failed to convince the staff members about a shared vision and the anxiety they should feel about not changing their ways – something the authors call 'forward-looking'. Instead, they found that the staff members became 'backwards looking', which caused them to perceive and express ambiguity and doubt. The authors go on to suggest these two ways of relating to the numbers, backwards and forwards looking, to be considered as possible 'felicity conditions' for the ranking's (counter-)performativity. I believe there is a possibility to say more about the conditions for performativity by paying even closer attention to the social processes that either enable or disable performativity at a micro-level. Similar to Pentland (1993), who found that accountants had to spend significant time in getting their audiences to 'feel comfortable' with their numbers, Boedker et al. (2020) can be read as implying a need to also examine instances where those who are the audience to the numbers are made uncomfortable by them. This entails focusing on the practices that imbue the numbers with ambiguity, as opposed to clarity, and with doubt, as opposed to certainty.

Boedker et al. (2020) also suggest that the rankings failed because they 'framed too little'. That is, the limited scope of the rankings prompted staff members to consider all things excluded or missing from the rankings and to rally around these presumed shortcomings. They link this to the so-called "incompleteness" literature on accounting (e.g. Busco & Quattrone, 2015, 2018; Jordan & Messner, 2012) and suggest that "the rankings produced clarity and a language of 'all things wrong'" (p. 17). Here then, perhaps, lies a clue to the 'shared language' of numbers proposed above. The authors argue that the incompleteness of the rankings, contrary to this stream of literature, did not drive a search for more creative solutions and initiatives. Instead, it 'clarified and reinforced a counter-narrative' (p. 17). I think this is a very important point, but perhaps somewhat narrowly conceptualised. For example, why is it that when managers deal with incomplete numbers, they are presented as active subjects who seek more creative solutions, whereas when staff members do the same, they are rendered as passive by ostensibly being served a 'clarified and reinforced counter-narrative'? To further explore and develop the conditions for performativity, it seems fruitful to pay an increased attention to the actions of those on the 'receiving end' of the numbers – just as the authors did in this case – and to examine how a wider array of alternative understandings and usages may be formed and carried out by them.

In summary, numbers ought to be viewed in terms of their form, function, and appearance, but also in terms of the social situations and context in which they appear. Indeed, Austin (1962) also rejects the notion that performatives can be

assessed in isolation, deprived of their origin within the 'total situation'. For Austin (1962), the total situation includes aspects such as mood, tone of voice, cadence, emphasis, use of adverbs or adverbial phrases, special verbs that act as connecting particles, gestures, and the overall circumstances of an utterance (cf. p. 73 ff.). In this thesis, the total situation means considering the characteristics of all actors involved, the numbers as they are made to appear, and the context in which a numbers act take place. I will turn to some of these aspects now, and the rest in the next chapter.

Performances with Numbers

Other authors have successfully drawn on the idea of *performance* to develop their notions on performativity (e.g. Loxley, 2006 p. 139-166; Parker & Sedgwick, 2013), but there is much to be gained by using it to examine the felicity conditions for a performativity of numbers, which, to my knowledge, is something only a few have done. Performance, as I use it here, draws on the dramaturgical tradition where an actor or group of actors put on performances as a way to manage situations and impressions in relation to an audience (Goffman, 1959). In this sense, a performance is always meant to produce an outcome and can therefore be viewed as either failed or successful. However, it is important to recognise that a binary scale such as this can be fruitful for analytical reasons, but that it is an oversimplification of how everyday social interaction plays out in real life. For example, successful performances imply that the performer is always aware of the performance that he or she is putting on and that people, during their day-to-day activities, manoeuvre themselves and others in strategic and conscious ways. This way of reasoning implies a level of individual agency and attentiveness that may be exaggerated. Moreover, it is, of course, within reason that a performance succeeds only partially, or that it fails yet still manages to produce an effect, albeit an unintended or unexpected one at that.

A basic problem with any number, in stark contrast to many lay and popular conceptions, is that *numbers do not speak for themselves* (Fauré et al., 2019; Pentland, 1993). On the contrary, speaking in the language of numbers, that is, crafting, communicating, and interpreting numbers, requires significant skill and effort (Cohen, 1982; Espeland & Stevens, 2008; Heath & Starr, 2022). Numbers are also reliant on frames of meaning and significance that need to be *performed*, or accomplished, within the social situations in which they are used (Vollmer, 2007). For example, numbers may not only need to be 'correct' but also

communicated, explained, and justified (Fauré et al., 2010). Numbers act in social situations, but their performativity should not be assumed. Rather, performativity has to be accomplished by all participants through joint and skilful efforts (Lorino et al., 2017). Any use of numbers is a social accomplishment, but what I am interested in is the ways in which numbers are used in communicative acts and as *performances*.

A performance comprises all activities used by one participant within a social situation to manage the definition of the situation and the impressions of other participants (Goffman, 1959 p. 15). There are many different ways to be a participant in a social situation, for example, as a 'ratified participant' like a patient at a hospital, or someone who acts in a 'particular social capacity', such as a doctor (Goffman, 1981). A performance, as alluded to above, can be put on by an individual or a team – a group of individuals who perform together and whose performance requires them to perform together (Goffman, 1959). Social situations encompass the entire physical arena in which the present actors are within sight and sound of one another (Goffman, 1981). A connection, of course, can be made to speech acts, where one participant acts as the *speaker* and another as the *hearer*. However, I have chosen to use the terms *performer* and *audience* for two reasons. First, this pairing is more evocative of the dramatist ontology to which this thesis subscribes. Second, but more importantly, unlike speaker and hearer, the terms performer and audience also embrace non-linguistic and non-vocal 'utterances'.

A core assumption of a so-called dramaturgical perspective is that people typically think, feel, and know more (or less) than they express in social situations (Goffman, 1959). However, dramaturgists are generally less concerned with unravelling the intentions behind a certain performance. To elaborate further on this point, consider a performer who attempts to present herself as trustworthy. It is generally of little interest to establish if she, in fact, is trustworthy – for example, by investigating if she has fulfilled her past promises. Instead, what is of interest is how she attempts to manage the impression of being trustworthy. In other words, it is the communicative act that is of interest and understanding what a particular performance accomplishes, as well as the chain of interactions that the performance generates between the performer and her audience.

The nature of the performance

Just as a performative, at least so it is claimed, relies on certain conditions to be met, so too can a performance be said to be of a certain nature. That is not to suggest that a performance must always be made in a certain manner, but rather that it tends to be constructed by a general set of building blocks and features. These components are what I refer to as the nature of the performance. All performances require a *performer* and an *audience* – this is true even in those particular situations when both roles are occupied by the same person (Perinbanayagam, 1974). Performances require a *setting* – the immediate physical environment in which a performance is put on. Since people are not always putting on performances, there is a temporal dimension that tends to be referred to as a *backstage* and *frontstage*. When actors put on performances, they do so by using their *personal front* as well as the setting and the *props* they have at their disposal. A performance, finally, is shaped by actors who occupy certain *roles* and speak from a particular *footing*.

The setting and the personal front

The setting is important for at least two reasons. First, it is crucial to consider that a "setting" does not have any 'objective' or 'real' ontological status that is somehow fundamentally different from an actor's subjective understanding of it. For example, there is no objective conception of a hospital that can be placed against a subjective understanding of what constitutes a hospital. What a hospital is, as a setting, is an *ongoing* social accomplishment. More importantly, settings are not just 'there', but they are, as Perinbanayagam (1974) notes, 'established as ways of eliciting a particular definition from whoever may come along' (p. 524). A setting is not just a place in which events are acted out, it also enables and constrains certain ways of being and acting. As Goffman (1959) might argue, certain settings serve as 'appropriate places' for certain performances and not for others (p. 33). Second, settings also provide the immediate physical environment in which a performance can be made; thus, the setting can offer a variety of things to a performer's creative disposal, such as furniture, décor, physical layout, and props.

A personal front is another vital part of the toolkit that is readily at an actor's disposal. One's personal front includes 'insignia of office or rank; clothing; sex, age, racial characteristics; size and looks; posture; speech patterns; facial expressions; bodily gestures; and the like' (Goffman, 1959 p. 34). Any of these aspects can be *used* in a performance. An obvious example would be for a large man to use his size in a performance aimed at intimidating an audience. At other

times, certain characteristics may hinder a particular performance and require the actor to compensate for it, or attempt to shift the audience's attention to something else. For example, consider a clinician who relies heavily on numbers within an encounter – a performance that may convey a sense of detachment and impersonality – the actor may employ a particular kind of personal approach to shift the performance to instead appear more engaged and caring towards his audience. Of course, the opposite also holds true, where a clinician struggling to be perceived as authoritative may deploy both numbers and their 'personal front' to establish the intended performance.

Just as numbers do not speak for themselves, what they convey and suggest to an audience is very much dependent on the setting and one's personal front. For example, Johannessen (2019) suggests that hospitals are settings that are deeply entrenched in cultures of biomedicine, where 'subjective' assessments are generally viewed with scepticism, while 'objective' numbers tend to be favoured by medical staff. In a study on auditing work, Pentland (1993) showed how the auditors spent significant time and effort to present a particular 'professional front' through various social rituals, aimed at making their audience feel comfortable with the numbers. On a similar note, Porter (2012) suggests that an important way to make numbers *seem* objective and uncontested is to *present* them in front of an audience in a way that displays them (or their presenter) as boring, technical, and uncontroversial. In summary, numbers do not automatically make a performance more credible or trustworthy; rather, to make the numbers appear that way requires a performance.

Backstage and Frontstage

When people express themselves strategically in social interaction, they do so by putting on performances frontstage in the presence of an audience, and correspondingly entering a backstage when there is no intended audience and no performance is being displayed (Goffman, 1959). The frontstage represents a time when individuals attempt to define and influence social situations in front of an audience, utilising all the resources available to them (Perinbanayagam, 1974). In contrast, the backstage represents a time when a performer, or a group of performers, may express certain facts that they have concealed or suppressed in front of their audience (Goffman, 1959). Perhaps it is also possible to consider backstage work as a particular kind of performance, where the "dirty" production of numbers is turned into "clean" numbers (cf. Espeland & Stevens, 2008; Pentland, 1993). This is in a way akin to what Vollmer (2007) calls 'regulatory dramas'. That is, dramatical acts put on or else employed to manage the meanings

of numbers. This is achieved by making and preparing the numbers backstage and then presenting and advocating for the 'correct' meaning of numbers on the frontstage.

Footing

An important aspect of a performance is the *footing* from which a performance, or even an utterance, originates. To understand footings, it is helpful to also discuss *roles* and the difference between the two. A role affords its holder with a 'particular social capacity' (Goffman, 1981). Such a capacity affords the role-holder certain social rights and responsibilities. For example, a police officer has the right to detain another person against their will, while also having the responsibility to do so in a certain manner. Such roles may, at least at times, be unescapable. For example, in most situations, a police officer may not arbitrarily shift from his or her role as an officer of the law to another role. However, within their role, they may adopt different footings. For instance, consider how the officer in question, while approaching a young child, may shift his footing from speaking as a police officer to speaking as a parent, fellow human, or as someone who was also a child once. All while still being in the role of a police officer. How would we know that such a shift has occurred? Police officers usually wear uniforms, which serve as a personal front that signals their role. A different footing can be achieved, for instance, by a dramatic change in voice, posture, gesture, or form of speech. A common way to express such a shift is to speak of 'changing hats' (Goffman, 1981).

Performances and their outcomes

If performances are orchestrated by actors to manage situations or impressions among an audience, these performances can be said to produce an outcome (cf. Lorino et al., 2017). When it comes to numbers, there seem to be a few such outcomes that can, at least in principle, be assessed as either accepted or rejected. Once again, it is important to recognise that a binary scale such as this can be fruitful for analytical reasons, but that it is an oversimplification of how everyday social interaction plays out in real life. It is, of course, within reason that a performance may be only partially accepted, or that it is rejected, yet still manages to produce an effect – albeit an unintended or unexpected one at that.

A performance and its outcome may not always, or even often, be clear-cut and obvious. Apart from the challenge of not having access to the "actual" intentions of a performer, or the "genuine" reactions of an audience, there are other

considerations tied to the outcome of a performance. A terrific example of such a case is offered by Lorino et al. (2017), who observed how audiences of accounting numbers would embrace erroneous performances made by managers in order to allow the performer to 'save face'. In other words, the managers' "successful" performance relied on the goodwill of their audience, who refrained from challenging the claims made by the managers. The authors suggest this to be an example of 'dramaturgical cooperation'. I agree, but will add that it may also be suggestive of the importance of social roles and status in performances of this kind. Managers occupy particular social roles, which suggests that their audience may have their own strategic reasons for not making the performer 'lose face'. In other words, it is not just a matter of who is allowed to wield the numbers, but who is allowed to wield them incorrectly – and in front of whom (cf. Michaud, 2014).

Summary

How and under what conditions can numbers do things? The main argument that I have advanced in this chapter is that any use of numbers in a communicative act is a performance aimed at an audience. One question concerns the character of the audience and how they are made to care about the numbers. A second concern has been the tendency in studies on performativity to propose what I see as forms of social determinism, in the sense that the strength of numbers is assumed, rather than conditioned. An important explanation for this turn of events is that performativity has been used in a too broad and lay manner. To address this issue, I have suggested a framework that facilitates a deeper engagement with the so-called felicity conditions needed for a performativity of numbers. In doing so, I have advanced a theoretical position that treats the conditions of performativity as social accomplishments by individuals and groups, rather than as naturally given facts, or as bound by rules that may not apply to numbers. In essence, I contend that performativity needs to be studied with an increased sensitivity to individual and group actions at the level of everyday work. While the contents of this chapter are what comprise the theoretical positioning of this thesis, it is worth pointing out that later parts of the thesis will also draw on additional theoretical frames and traditions when called for. While I have attempted to establish a well-rounded theoretical approach to the field, it has not been my intention to establish an all-embracing, rigid, and narrow framework through which everything must come to pass. On the contrary, different situations, numbers, and interactions sometimes may call for different approaches. So, in the words of Goffman (1961):

'Better, perhaps, different coats to clothe the children well than a single splendid tent in which they all shiver' (p. 11).

CHAPTER 4
METHODS

Introduction

This thesis uses rich empirical material crafted from participant observations conducted at a large Scandinavian hospital. My ethnographic fieldwork primarily took place over a two-year period at a Renal Care Unit (RCU) and an Administrative Unit (AU). However, as the Covid-19 pandemic struck, I abruptly withdrew my presence from the field after accomplishing 112.5 hours of participant observations. The pandemic had a significant impact on healthcare in general, and renal care in particular. The "typical" kidney patient treated at the RCU tended to belong to the so-called high-risk group associated with Covid-19 (Folkhälsomyndigheten, 2021). High-risk factors included one or more combinations of having a weakened immune system, multiple illnesses – many of which are common among patients with kidney disease – severe illnesses (such as kidney failure), and advanced age, which was common among patients at the RCU.

Despite having to abandon my fieldwork midway, I was still able to craft about 250 pages of transcribed fieldnotes. In the field, I made observations at the level of everyday care, administrative tasks, and decision-making at levels stretching from the individual discretion of assistant nurses to political decisions made at board meetings. My observations included everyday work practices, actions, events, and interactions, as well as some of the meanings held by actors as they related to an array of numbers. I investigated how numbers were presented, employed, and referred to in everyday work and conversations of healthcare staff, administrators, managers, and patients. For example, how they talked about, reacted to, and made use of clinical threshold values as well as financial, administrative, or performance related numbers. In other words, I went looking for the numbers.

However, seeing numbers can be tricky. The many ways in which numbers can be fashioned, formed, and paraded around in an organisation engenders a methodological issue. How should one go about in looking for numbers that are, so to speak, not there? During my fieldwork, this question caused me some headaches. Yet, inspired by Weick's concept of 'disciplined imagination' (1989) and Becker's (1998) notion of 'imagery', I employed a fairly simple trick for 'seeing' or 'imagining' numbers that were part of the setting. I ended up using a metaphor and imagery of numbers as stories. The story metaphor was a simple, pragmatic, and fruitful trick that allowed me to 'visualise' and discern numbers even when they were not immediately present or intuitively easy to spot within the social interactions I observed.

Indeed, metaphors can have a profound effect on how we think, see, and act in the world (Lakoff & Johnson, 1980) and install a 'generative capacity' that helps us see the world in new and insightful ways (Jermier & Forbes, 2012; Morgan, 1997). The imagery of a story opened my view on numbers as characterised by having a *beginning, middle,* and *end*. Moreover, a story also tends to have a plot, a setting, one or more characters, and moral implications. Translated into a theoretical thematisation, the following rather intuitive structure emerged for investigating numbers: (1) to investigate the production of the numbers (beginning); (2) to explore how the numbers were used, misused, or unused (middle); and (3) finally, to examine the reactions, unintended effects, and transformations caused by the numbers (end). The metaphor of numbers as stories also provided me with a way to approach the field in a slightly different way, and to see what went on there in a slightly different light.

Yet, we must not fall prey to the assumption, or expectation, that numbers must be immediately present within a situation for them to affect that situation. During my fieldwork, I paid due attention to the complexities, messiness, and ambiguities that were inherent in everyday work and in, or around, the numbers that circulated there in some way, shape, or form. In my observations, I focused on events and interactions where numbers 'appeared'. The word 'appear' is tricky because it is all too easy for important aspects of numbers to go unnoticed if too close attention is paid to how they appear in social situations. For example, Perez (2019) makes an excellent point when she notes that, on the one hand, numbers, technology, and algorithms are crucial for understanding gendered data biases, while also noting that such biases stem from an absence of data which makes such biases difficult to look for in the data. In other words, there may be situations where a number will affect a situation without being apparent in that situation.

There can also be situations where important numbers could have been used to change the course of events but were not. I paid much attention to how numbers were represented and displayed in the field – say as plain numbers, graphs, formulas, or diagrams. My point is that we should not wait for numbers to 'appear' in preconceived formats, but instead consider their role as part of both a wider and immediate social context, along with the deeper and more abstract meanings and significance they may have.

In this chapter, I draw upon Van Maanen's (2011a) ethnographic taxonomy, which entails *fieldwork*, *textwork,* and *headwork,* to explicate what I did in this study and how I did it. The first part, fieldwork, describes my ethnographic approach and outlines how I made my observations. Within this part, I also discuss and reflect upon the challenges of being in the field and making observations. In the next part, I discuss textwork and the process of making and going from *fieldnotes* to *transcriptions*, and finally *accounts*. Finally, in the part called headwork, I discuss my analytical process from how I sorted and selected my material to how I used an *abductive approach* to *defamiliarize* myself from the field and craft '*thick descriptions*' (Geertz, 1973).

Fieldwork

Ethnography lent itself well for me to be able to apprehend and interpret the 'multiple layers of meanings' and the 'local interpretations' that were interwoven in the 'complex symbolic systems' of everyday organisational life at the hospital (Geertz, 1973; cf. Prasad, 2015). This was important for many reasons, but one of them was about adhering to some of the issues found in studies on performativity (described in detail in chapter three), such as their tendency to dismiss or downplay the role of context, diverse meanings, and the complexities of everyday life (cf. Giddens, 1976; Goffman, 1983). My ethnographic approach allowed me, or rather, forced me to deal with these issues head-on by being in the field and observing how different people related to, made sense of, and acted on the numbers in a multitude of ways at the level of everyday action and decision-making.

At the same time, in my ethnographic approach, the cultural aspects commonly associated with ethnography were somewhat downplayed in favour of communicative acts in everyday situations. That is, a slightly greater and more detailed focus on ordinary talk and speech acts in rather mundane and day-to-day

activities (Forrester, 1992). A common criticism towards the dramaturgical perspective, which I subscribed to in this thesis, is that it tends to over-attribute individual agency, neglect irrationality and unconscious actions, turn a blind eye to power relations, and treat the self as chosen rather than as something imposed on persons by other people or social structures (Prasad, 2015). To address at least some of these concerns, I adopted 'critical ethnography', which turned out to be well-suited for exposing at least some of the irrationalities, unconscious actions, and power relations that took place in the field (cf. Forrester, 1992).

People are situated in social, cultural, economic, and historical contexts that may allow them to do certain things while disallowing others. I used 'critical ethnography' to investigate the role of numbers in maintaining, altering, or establishing social structures in communicative interactions, as well as for understanding how beliefs and world views could be formed within these interactions (cf. Deetz, 1992; Forrester, 1992). Drawing on Forrester (1992), my observations often entailed a focus on the micropolitics involved in speech acts. In making my observations, I was inspired by his suggestion to focus on four aspects involved in social interactions. First, what facts does a speaker attempt to establish in order to shape the listener's beliefs? Secondly, what norms of legitimacy does the speaker invoke to appeal to the listener's consent? Thirdly, what inner dispositions does the speaker convey to appeal to the listener's trust? Fourthly, what categories or ways of representing an issue does the speaker use to frame the listener's attention? I never used these as a strict observational guide, but as a particular way of paying attention and opening up some of the ostensibly trivial interactions I observed.

This study is about what numbers do and what people do with numbers in social situations. What that boiled down to, in terms of a research method, was the need to be in the field with those who had to relate to, make sense of, and use the numbers. That is, of me being there in the field observing these things by experiencing them firsthand together with the people whose lives were affected by the numbers in one way or another. To this end, I made observations at the hospital on 27 days, or 112 hours and 30 minutes. Most of these observations took place during a six-month period. All but one of my observations took place on either the RCU or the AU (these locations will be presented in greater detail in the upcoming chapter).

Observations

For the sake of clarity and parsimony, I have provided a modest and general overview of my observations (see table 1 below). However, in practice, most of my observations were 'messy' in the sense that I often shadowed or observed one or more actors throughout a day of observations and in doing so, I often visited other parts of the hospital, had coffee or lunch breaks with several informants, and so on. Moreover, the term 'everyday work' is vague but will be further explored in the next chapter. Apart from that, all meetings generally involved what I call 'focused observations', whereas 'everyday work' and 'walkarounds' generally involved 'shadowing' or 'hanging around'.

Table 1. Observations.

	Site	Activity	Time (h)
LEARNING THE ROPES	AU	Study commencement meeting	2.5
	Off-site	Workshop, Swedish Renal Registry	5
	RCU/AU	Five interviews and walkaround	4
	RCU/AU	Meeting and walkaround	3
EVERYDAY WORK, PATIENT AND WORKPLACE MEETINGS	RCU	Everyday work	6
	RCU	Everyday work	5
	RCU	Everyday work	5
	RCU	Everyday work	7
	RCU	Everyday work	4
	RCU	Everyday work	1
	RCU	Everyday work	5
	RCU	Everyday work	3
	RCU	Everyday work & workplace meeting	3
	RCU	Everyday work & workplace meeting	6.5
	RCU	Everyday work, team & workplace meeting	9
	RCU	Everyday work, patient-nurse meetings & workplace meeting	5
	RCU	Everyday work & patient meetings	3
	RCU	Everyday work & patient meetings	5.5
	RCU	Everyday work & patient meetings	5
	RCU	Everyday work & patient meetings	5
	RCU	Patient meetings	2
	RCU	Patient meetings	2
ADMINISTRATIVE MEETINGS	AU	Follow-up meeting: budget & performance	3
	AU	Follow-up meeting: budget & performance	2.5
	AU	Follow-up meeting: budget & performance	3.5
	AU	Presidium, board of directors	3
	AU	Board meeting	4
Total:		**27**	**112.5**

As indicated at the bottom right of the table above, I conducted 112 hours and 30 minutes of observations. Somewhat simplified, I spent approximately 14.5 hours getting to know the site and 'learning the ropes' through interactions with some of my few key informants. The lion's share of my observations consisted of everyday work at the RCU, which involved staff members working on their computers or phones, attending staff meetings, or meeting with patients in person. These observations amounted to 82 hours of fieldwork. Lastly, I spent around 16 hours observing various administrative meetings, ranging from informal coffee breaks to managers and administrators reviewing the RCU's financial and performance targets, to hospital board meetings.

Informants

Table 2. Informants.

Site	Role	Name (Pseudonym)
RCU	Nurse	Robin
RCU	Nurse	Casey
RCU	Nurse	Max
RCU	Nurse	Bobbie
RCU	Nurse	Elliott
RCU	Medical Doctor	Kendall
RCU	Medical Secretary	Kim
RCU	Patient	Hugo
RCU	Patient	Susanne
RCU	Patient	Sigismund
RCU	Patient	Renaldo
RCU	Patient	Lennart
AU	Chief Medical Officer / Doctor	Alex
AU	Area Manager	Sidney
AU	Unit Manager, RCU	Parker
AU	Head of Specialized Medicine, Area Manager	Devan
AU	Financial Controller	Taylor
AU	Head of Specialist Doctors	Ridley

All in all, approximately 75 individuals were involved in the study as informants on some level. Because my fieldwork involved shadowing and hanging around in an open environment, there were numerous individuals who, in one way or another, helped shape the study without appearing in the table above. Out of these, around 25 people had only a marginal role and were therefore excluded

from being presented in the study. The remaining 50 informants played a more significant role in my fieldwork – albeit in varying ways. For example, they were individuals who regularly attended meetings that I also participated in, or patients I saw regularly, but was never formally introduced to. Similarly, there were some individuals who provided insights while in the field, but whose accounts were not included in my empirical chapters, and thus they too have been excluded from being presented here. What remains are 18 key informants, who all inhabit my forthcoming analytical account of being in the field (chapters 5-8).

All the names of the informants mentioned in this thesis are gender neutral pseudonyms. Using pseudonyms was always the obvious choice for me to protect my informants' identities and maintain confidentiality. But more than that, in a study built on rich empirical material derived from observations, the possibility to note a variety of identity markers, such as race, gender, class, ethnicity, sexual orientation, language, religion, age, appearance, and so on, is abundant. All of these markers can be important for understanding and interpreting the social dynamics and power relations that operate within a research setting. At the same time, all of them risk exposing the identities of those who participate in a study, especially if these participants operate in small communities where only an identifiably few actors may possess certain traits or identity markers that make these people stand out (cf. Damianakis & Woodford, 2012). For example, within a small group of specialist nurses, there may be only a few, or even just one individual of a particular gender, ethnicity, or age. Such was the case at the RCU. In most cases, many of these identity markers, such as sexual orientation, were irrelevant for this study. In other cases, however, such markers may have been relevant in the sense that they could have added additional layers of interpretation to the empirical material. Perhaps, if it had not been for the Covid-19 pandemic, I could have amassed a larger number of informants, which might have allowed me to portray each informant in a richer image without thereby risking to expose their identities, but I was not. Instead, my community of informants was rendered too small not to risk exposing anyone's identity by providing such details.

It was not an easy decision to omit at least some of these identity markers from what I will later refer to as "accounts" – the empirical material as it is presented in this thesis. At the time of my fieldwork, the RCU was heavily unbalanced in terms of gender, and I ultimately felt that using gender neutral names would reduce the risk of indirectly exposing any of my informant's identities (for patients, pseudonyms were sufficient). It was a difficult decision to "degender" the *names* of my informants. Yet, I felt that the importance of safeguarding informant

confidentiality ultimately outweighed the potential for alternative readings through various intersectional lenses that lay outside the core phenomena being studied. However, I put names in italics because it is worth mentioning that I did not degender the ways in which these actors spoke, what they said, or how they acted, but merely the ways in which their names and pronouns signalled a particular gender. The roles occupied by the staff members were generally too important and significant for understanding their actions to be considered for removal, but some minor modifications were appropriate. At the small care unit where I did most of my observations, there was only one assistant nurse employed – although this role was filled by a few different people throughout my study. Nonetheless, to protect their identities, I 'promoted' the assistant nurses to the title of nurses. The distinction between different kinds of specialist nurses in renal medicine also risked exposing their identities. For this reason, I outline the different kinds of nurses who make up the nursing team at the RCU in the next chapter. However, in my accounts of their work and their actions, I will simply refer to each of them as "nurse". Again, although these choices may impact the way the thesis is interpreted, I firmly believe that they did not negatively impact the core arguments made in the thesis, and that my decision to remove these aspects were appropriate and justified for me to safeguard the confidentiality of my informants.

Informed consent

I made every reasonable effort to make my role as a researcher transparent to those involved in the study. Concretely, the study passed an ethical review by the Swedish Ethical Review Authority (Dnr: 2019-00959) which, upon its approval, was disseminated to all staff members who participated in or were otherwise involved in the study. I also introduced myself as a field researcher, along with the broad outlines of the study when meeting people or attended meetings. For other research participants – principally patients – I provided information leaflets along with an oral explanation, followed by obtaining their oral consent – or option to withdraw from the study (in practice, the latter never occurred). Essentially, the letters I distributed contained succinct descriptions of the background, purpose, methods, data management, and contact details needed for making an informed decision and, if needed, make a formal complaint or withdraw from the study.

A few more things can be said about *informed consent*. When making observations, there is no such thing as being merely 'a fly on the wall'. Being psychically present in a room, especially in a small room with only two or three other people, can make a big difference to the room's atmosphere. These kinds of situations were

quite common. There were, as I saw it, obvious risks that, however small, my presence in a room, for instance, alongside a nurse and patient, might be an inconvenience to either the patient or the nurse. At worst, it might have led to a patient hesitating to ask questions about something, or nurses somehow being disturbed in their work, potentially providing worse care than they would otherwise, without me being in the room. However small these risks may appear, they were, of course, risks that those who participated in the study should be informed about and consent to.

Everyone who participated in the study was informed about, and consented to, its rationale, purpose, and methods by giving their *verbal consent* to participate. I decided to use verbal consent for two main reasons. First, my thinking was that it would be during the actual meetings that patients would come to feel, experience, and understand what it would be like to have a researcher present, observing what happened during their meeting. I suspected that signing a consent form might have led patients to treat their consent as final, and to get the impression that they could no longer withdraw from the study at any time. Conversely, I wanted to ensure that patients would always feel empowered to withdraw from the study, or ask me to leave the room, at any time. Second, written consent would also have required me to store personal information about the participants, despite having no intention of noting, storing, or using any such information.

Interviews

As the study began, I conducted five essentially unstructured interviews. The purpose of these interviews was to learn about the setting and the work performed by staff members. These interviews lasted approximately 25 minutes, except for one that lasted about an hour. The questions I asked were essentially aimed at giving me a better understanding of the work that was performed at the RCU, how the work was organised, and how the organisation was structured. These topics were discussed in detail along with aspects such as how patients were summoned to the hospital, who these patients were, and how I could best approach them. Questions included inquiries about the number of staff members at the RCU, their formal work tasks, the number of patients, and so on.

One more thing about interviews. Even though my observations did not involve formal interviews, I did, at least occasionally, treat some of the observations I did as if they were open-ended interviews. That is, in certain situations, I was able to sit down and take thorough notes while having a conversation with one or more

informants in a casual way, without any clear direction or purpose. These observations share many features associated with interviews – recurring questions and answers being the most obvious. During such situations, I took extensive notes, but I never used a voice recorder (during the five formal interviews that I made, I did use a voice recorded). This is all to say that I did not just look at what people were doing while I was in the field, but I continuously interacted with them by asking questions and having them explain what they were up to or what they were thinking. The way that I would ask questions about how my informants accomplished what they did and the kinds of answers I got seem to be well in line with what Baker (2002) calls 'accounts'. That is, what the informants would talk about was usually not reports about facts outside of the immediate situation but ongoing sense-making work in which they would explain, justify, or describe the actions they were, or had just been, performing (cf. Baker, 2002).

Being there

Because I wanted to study the social interactions in which the role of numbers was played out, conducting observations was essential for this thesis. Stated in the simplest terms I can think of, observations meant that I was at the site for some amount of time, and I would see, hear, and sometimes even feel what the people there were up to. I watched, listened, smelled, touched, and felt what every day work was like there. And, of course, I wrote. I was always writing – jotting down happenings, sayings, my own emotions and experiences, other people's actions, and reactions, and sometimes the minutiae details of work and the physical environment in which that work took place.

Sometimes being in the field was incredibly tedious, which made me shift my attention from what was taking place at the time, to focus instead on what was not happening. For example, occasionally, I would make detailed notes of the hospital's interior such as describing the furniture, style, paintings, what people were wearing, and so on. These were also points in time when I would notice what was *not* happening, such as when I spent a full day together with two nurses who did not get to meet a single patient. Other times, making observations was incredibly stressful and I could barely keep up the pace, and my pen could have struck a tinder. These were often occasions when I would be *shadowing* someone or *hanging around* in the canteen, when taking notes could be difficult.

Even though there would be frequent opportunities for note taking, it often seemed better to delay my note taking while observing. Sometimes, of course,

being on the run made it difficult to take notes, and so I had to take any opportunity I could to jot down keywords and such. But most times, I would engage in what Goffman (1989) calls 'off-phase' note taking in a way that would make it more difficult for those who were being observed to detect what I was taking note of. I would sometimes also do this when I wanted to ensure those who were observed that I was not taking notes of what they said, even though what I was noting down at the time had nothing to do with what was said then and there. For example, I would off-phase my note taking when patients talked about personal or sensitive issues.

The old proverb 'seeing is believing' is echoed by the rationale for doing observations. But, of course, our senses may deceive us. Neither writers nor readers of ethnographic texts should lean back confidently, thinking that first-hand accounts install for us some privileged position from which an absolute truth, fact, or omnipotent knowledge lies within our grasp. Observations are almost always messy, ambiguous, and heavily filtered by the observer. Yet, I believe that observations remain our greatest tool for coming to terms with what is going on in the fields we study as researchers. The field notes that I have crafted, quite clearly, make up the most crucial part of my empirical material and analysis. At the same time, the insights that I have gained by being in the field have been indispensable for my analysis. Despite my best efforts to spot and 'capture' "everything" that I have seen in the field on paper, this has not been possible. Everyday interactions are often subtle, elusive, and highly contextual – especially to an outsider. Many of the connexions, inferences, and conclusions that I have been able to draw, I have been able to make because of a certain 'sense' that I gained for the people, situations, and context that I experienced first-hand.

Observations

My empirical material was crafted from participant observations formed by so-called naturally occurring data, or in other words, things I experienced as they happened. During my observations, I paid attention to the use (and sometimes the non-use) of numbers as well as how people made sense of and related to (or ignored) them. Yet, what numbers do and what people do with numbers does not happen in a vacuum – on the contrary. Many seemingly unrelated or trivial aspects of everyday organisational life were crucial for understanding how, when, and why numbers were used or not, and for when they became important or inconsequential. While almost all my fieldwork entailed making observations, the kinds of observations I made can largely be divided into three types: *hanging*

around, shadowing, and *focused observations*. Here is what I mean by these kinds of observations, how I made them, and the point of making them.

Hanging around

To hang around is what it sounds like. That is, I would often arrive at the hospital without any clear agenda or appointment. Instead, I would simply 'hang around'. Sometimes, this meant grabbing a chair to sit alongside a nurse or administrator as they worked. Other times, it meant strolling around the corridors to take notes of various documents, talk, artefacts, and happenings. These observations were typically more driven by my own curiosity and interest than by what a particular actor was doing – as was the case while 'shadowing', or by the framing of a certain observed event, such as in my 'focused observations'.

When I hung around at the hospital, I observed cultural expressions. Some of the broadest observations I made involved the physical work environment, such as furniture, notice boards, and the way in which different rooms had been furnished and decorated. I also observed how staff members dressed, as well as how they talked, presented, and poised themselves, and the metaphors, jargon, and forms of talk they used as they spoke. These observations provided subtle but valuable clues to the norms, values, and rationales of my informants. As Alvesson and Billing (1997) point out, cultures are often expressed and reproduced through rituals, artefacts, and metaphors. Hatch (1993) also notes that various artefacts and symbols found in an organisational setting can represent underlying assumptions and values held within that organisation. Others have observed clothing as a significant aspect of social identity and symbolism within hospitals (Pratt & Rafaeli, 1997). Features such as furniture and clothing are also frequently utilised as 'personal fronts', 'settings', and 'props', which are all important tools in social interactions and for 'frontstage performances' (Goffman, 1959).

Observing staff members as they interacted 'off the clock', such as during breakfast or lunch, but also while going to and from various meetings, provided me with a glimpse into what Goffman (1959) refers to as the 'backstage'. There, together with their peers, staff members would often discuss their thoughts on the organisation and reflect on their work. While many of my observations can be understood as involving so-called 'frontstage performances' – situations in which one or more persons actively aim to 'put on' some kind of performance – the differentiation between 'frontstage' and 'backstage' should not be exaggerated. From an analytical standpoint, the difference is fruitful, and from an empirical perspective, it may be insightful. However, a strict focus on the distinction may

be deceiving. A situation expected to reveal a frontstage performance may be an example of the contrary, and a presumed backstage 'confession' may, in fact, be another frontstage performance. Nonetheless, when I hung around at the hospital, I would frequently overhear or be part of conversations that might best be described as 'unfiltered'.

Shadowing

Workplace shadowing lends itself to explore how actors act and choose between alternative courses of action within and between everyday interactions. The most important feature of shadowing is to move with someone. As argued by Czarniawska (2014), shadowing is well-suited for studying the work and lives of people who move often and quickly from one place to another. A prime example of such people are doctors and nurses, who must typically move from one patient to the next. Indeed, shadowing allowed me to explore and shed light on the everyday lives of clinical and administrative staff, and how different performances were being chosen, mobilised, and conveyed by them (cf. Ellingson, 2004). This was most salient in patient-clinician interactions, such as when nurses would adjust their tone and gestures before, during, and after meeting with a patient.

When adopting shadowing as a technique for making observations, I found two factors to be particularly important to consider. First, I found it fruitful to observe a person over time in several different interactions. This was crucial for getting a sense of that person's characteristics, which was needed to appreciate when significant shifts in behaviour occurred. Thus, I was often able to spot and examine the different choices and situations this person had to respond to, how the person made and interpreted his or her choices, and how the person was able to define and influence the situation, as well as what tools were used in doing so. Second, observing actors in-between these different interactions was important. Doing so enabled me to examine how actors coped with different and sometimes conflicting demands over time – for example, the time it takes to go from one patient encounter to the next. Shadowing allowed me a glimpse of the complex social and emotional labour performed by medical staff.

Focused observations

Simply put, focused observations involved observing a certain event or situation with a specified start and end time, such as various forms of meetings. An important practical aspect of focused observations was that I was usually able to sit down and take detailed notes – something that was usually much more difficult when shadowing or hanging around, or at least more difficult while also keeping

up with the pace of walking along and writing. I conducted focused observations during certain events and situations where I expected that the use, or non-use, of numbers could shape that situation or interaction. For example, in 'follow-up' meetings on performance and financials, and patient-clinician meetings. However, this is not to say that my expectations were always met – they were not. My focused observations were all aimed at covering events where I expected that frontstage performances would be deployed by the actors involved – such as to convey a particular impression or advance some personal or political agenda.

The kinds of focused observations I made include observing administrators and clinical staff debating actions and choices, handling remittal forms, and establishing their priority, as well as a variety of meetings among staff members. These meetings generally involved informational sessions concerning budgets, performance targets, knowledge-sharing, and decision-making. The common characteristic of these meetings was that they were typically purpose-driven, meaning that those who participated usually occupied a clear role and that the meetings generally had a clear purpose, sequence, and agenda. Some meetings, however, such as the nurse's weekly workplace meetings, were mostly structured in the sense that they were held at the same time every week and that their manager would set the agenda and chair the meetings. Nonetheless, these meetings still involved plenty of leeway for *ad hoc* agendas and spontaneous discussions, at least compared to most other meetings I attended at the hospital. I also observed an assortment of patient-nurse interactions that can be divided into four common forms of interactions: (1) first time visits, (2) revisits, (3) information sessions, and (4) training sessions for dialysis treatment. These meetings were heavily 'scripted' by the nurses, in the sense that they would typically say the same things, in the same way and order, regardless of who was at the receiving end.

Textwork

The process of writing is arguably the most important aspect of ethnographic work (cf. Emerson, Fretz, & Shaw, 2001, 2011; Sanjek, 2019; Van Maanen, 2011b). Indeed, as Atkinson (1992) states, 'the limits of what can be understood about the world are set by the boundaries of what can be written and what can be read' (cited in Emerson et al., 2001 p. 356). While saying so may seem superfluous, it is not enough for an ethnographer to simply 'be there' and to have

'access' to the field and its "natives". At the end of the day, it is the ink that has found its way onto paper that matters. It is important to note that ethnographic writings are not merely reflections of what happened in the field, or discoveries made by the fieldworker while being there. Rather, ethnographic writing is about creating a version of the world that was observed (cf. Alvesson & Deetz, 2000; Emerson et al., 2001).

Next, I discuss my textwork in terms of what can be considered the three kinds of texts that form the cornerstones of ethnographic work, namely *fieldnotes, transcripts,* and *accounts*. I have chosen to distinguish between these three kinds of texts for the process of 'writing up' my material to be more transparent and to reveal the choices, selections, and interpretative work that went into creating the empirical material that make up this thesis.

Fieldnotes

I made copious amounts of *fieldnotes* while I was in the field. These fieldnotes often comprise jottings such as keywords and phrases, mental notes to be written up later in the day, and – when able to do so – through rich descriptions of what happened and verbatim quotes of what people said or did. All these notes were either written while I was at the site – even for my mental notes, I would write down cues that could jog my memory later. These mental notes often included striking details, impressions, personal feelings, or interpretations that I could not put down in writing while also keeping up with the pace of observing and noting what was happening around me. Sometimes, I would go off at lunch to write up notes I felt were so important that I had to get them down on paper straightaway. Other times, after a full day of observations, I would write down as much as I could afterwards at a café, during my commute, or when I got back home.

Over time, my fieldnotes became increasingly concise as I developed my notetaking skills, such as by using abbreviations, keywords, and so on. The main exception was when I would 'record' the dialogue between participants in a meeting. In those cases, the notes were often quite extensive. I also developed the habit of making fieldnotes that would appear to be incomprehensible to others. This was due, in part, to frequently being on the go, but its main function was to ward off prying eyes. The fieldnotes I made were sketch-like and usually started by noting the start and end time of the observed event, who participated, a description of the setting and the actions taken, and what was either the stated or presumed purpose of the event. I would also note my own actions, questions

(stated or unstated), reflections, and emotions. While being in the field, I tried to take note of as much as possible to facilitate rich transcriptions. All in all, I used up about four A5 sized journals with my fieldnotes.

Transcripts

While my fieldnotes can be understood to reduce and compile just-observed events, individuals, and places into written notes, my transcription process was about providing flesh and blood to the bare bones that were my fieldnotes. Although my process of making fieldnotes also entailed choices such as what to pay attention to, what to ignore, and how to record an event, they nonetheless made up what Clifford (1990) calls 'raw' fieldnotes. It is, I believe, in the process of transcription that the choices involved in writing become most apparent (cf. Van Maanen, 1995, 2011b). It was also in the process of transcribing my fieldnotes that I was able to 'turn away' from the immediacy of the site and go deeper into my own experiences and interpretations of being there (cf. Clifford, 1990).

It was also in the process of transcribing that it became most apparent that the empirical material was not merely discovered *in* observations but rather created *from* observations. In other words, any empirical material derived from fieldwork has been mediated and transformed by the way it has been written. It was in the process of transcribing my fieldnotes that I would select, focus, interpret, influence, emphasise, and shape my findings in various ways (cf. Clifford, 1990; Watson, 1994). The main ways in which I did so was to write my fieldnotes in ways inspired by what Van Maanen (2011b) calls *realist, impressionist,* and *confessional* tales, which represent three distinct ways of writing ethnographical texts. Each tale contributed with a different way for me to see, think, and write about what I had experienced in the field. When I transcribed my fieldnotes, I moved between these different tales; through each transcription, I also became better at noticing and taking notes of these things while in the field.

Transcribing realist tales prompted me to focus on the detailed, routine, and mundane aspects that I experienced in the field. This often included lengthy and detailed descriptions about what staff members were doing at work – which was sometimes boring, often a lot, and occasionally 'nothing', such as waiting around. When I wrote impressionist tales, on the other hand, I would allow myself much more freedom to use evocative language to describe, in greater detail, how I recalled certain experiences in the field. This was also the time when I would most

actively defamiliarise myself from the field by turning familiar images into unfamiliar worlds. These transcriptions often entailed writing vivid descriptions of what I had seen, heard, or felt while being in the field. While my 'confessional' notes were few, they were nonetheless important. Often, these transcripts were made by pursuing to the end the thoughts, feelings, and reflections I had made in my fieldnotes. These often involved my doubts, difficulties, and insecurities, but also various interpretations and broader reflections I had made at some point. Early on, these writings provided a cathartic way of dealing with some of the anxieties I experienced while doing my fieldwork. Later on, some of these notes were helpful for understanding what I had experienced in the field and for identifying biases and prejudices over time (cf. Emerson et al., 2001). Similar to Goffman (1989), I also found that some of my emotions also mirrored those naturally occurring in the field.

Accounts

The final part of writing my empirical material was to turn these into accounts. Ending a speech on conducting fieldwork, Goffman (1989) urged ethnographers to avoid 'defensible' prose and statements and instead write as lush and loose as possible (p. 131 f.). Indeed, ideas often come in unexpected ways and so when I transcribed my fieldnotes, I would always try to ward off self-criticism and judgement, to allow my imagination and creativity to roam free (cf. Freud, 1913 p. 77 f.) – given the constraints set up by my fieldnotes, of course. Thus, I tried to describe, explain, and understand what I had observed without worrying about it appearing incorrect, exaggerated, or too narrow. Instead, I focused on writing about the field as I had experienced, interpreted, and understood what had happened there.

If transcribing my fieldnotes was about making my fieldnotes come to life, then turning the transcripts into accounts was about bringing them back into the field, figuratively speaking. Hence, crafting accounts was about selecting excerpts that would allow me to construct a narrative that could represent the role of numbers and everyday work at the hospital in a rich and full manner. These accounts had to be decontextualised and recontextualised, cleaned up, and reinterpreted.

When I turned transcriptions into accounts, I tried to maintain as much of the context and situation as possible. To clean up the transcripts means that I removed redundant or irrelevant parts and, when appropriate, cut longer excerpts down to their bare bones. In essence, I strived to maintain the original character of their

transcription while making them trim and fit. These accounts are ultimately what I have analysed in making this thesis, and when it has been called for, I have gone back either to informants in the field, my fieldnotes, or transcripts, and to various documentary sources to confirm statements or my interpretations of them. What remains are my accounts of what happened in the field.

Headwork

The fact that my fieldwork was stopped short while I was amid it implies constraints regarding the empirical material that I was able to generate. However painful these constraints were for me at one point in time, they also propelled me into more *headwork* – such as close readings, layers of interpretation, and careful analysis of the empirical material that I had managed to craft. In this study, headwork meant a continuous expansion and application of my 'interpretative repertoire' (Alvesson & Sköldberg, 2009). The latter refers to an ability to consider different aspects of my empirical material by use of creativity, theoretical depth, breadth, and sophistication. For me, this meant reading a variety of academic and fictional texts broadly and intensely as potential sources of inspiration and creativity. Such readings normally entailed classical novels, ethnographies, and academic texts representing diverse theories and methodologies. The way I see it, ethnographic headwork ultimately boils down to crafting '*thick descriptions*' (Geertz, 1973) aimed at saying something 'interesting' (Davis, 1971). However, the term thick description is often misappropriated, the value of producing them underutilised, and the road towards making them vague and mysterious.

Nevertheless, before describing something, regardless of its thickness, one must first decide what to describe. For this reason, I will first discuss my process of sorting and selecting my empirical material. Thereafter, I turn to the value of thick descriptions for making research interesting, what they have meant in this study, and how I have made them. In essence, I discuss crafting thick descriptions to produce more interesting research by applying headwork strategies such as *abduction*, *defamiliarisation*, and different kinds of *interpretative work*.

Sorting and selecting

I spent much time going through, *sorting,* and *selecting* my empirical material, which consists of about 250 pages of transcribed fieldnotes, several organisational

documents, and five interviews. In doing so, I drew much inspiration from Rennstam and Wästerfors' (2018) advice on sorting and reducing empirical material. However, to "reduce" may imply that the entirety of my material was somehow reduced to a more manageable and presentable quantity – say from 250 pages to about 25. In a way, this is true. However, it is important to note what these 25 pages represent, and what they do not represent. They are not a condensed version, or summary, of all the things that occurred in my fieldnotes – and in the field. What they are is a selection of what I believe to be key instances and particularly rich passages of empirical material that exemplify certain phenomena that pertain to numbers and what people did with numbers. Therefore, to be a bit more precise about what I did, I have replaced the term 'reducing' with selecting.

Sorting

I sorted my material through a kind of analytical induction (Rennstam & Wästerfors, 2018 p. 92 ff.). Basically, this means that I identified certain phenomena within my material and then sorted them based on their richness and interestingness. I do not think it is possible to determine exactly what qualifies a particular slice of empirical material as 'rich' or 'interesting'. However, oftentimes, clues towards richness in my empirical material were revealed by longer and coherent narratives, events, or stories told or performed by an actor. Interestingness was often found in excerpts that, given my knowledge of the field and the topic, revealed, or pointed towards some particularly surprising or mysterious aspect in the material (cf. Alvesson & Kärreman, 2007). Nonetheless, interestingness was also sometimes about commonplace things and how certain actions or topics were salient or commonly observed in the material. That being said, I also conducted four structured attempts at sorting my empirical material.

First, I read through all my transcripts in chronological order. As a result of this reading, I reorganised my transcripts from 27 observations (each day of fieldwork representing one transcript) to 67 transcripts, with each representing a particular event. In other words, I divided full transcripts into more manageable segments by creating broader categories for what these observations entailed. For example, a full day of observations, previously made up of about 15 pages of text, categorised only by date and location, was subdivided into the following segments: (1) morning meeting, (2) breakfast, (3) everyday work, (4) lunch, (5) everyday work, and (6) workplace meeting. The point of this round of sorting and categorising was not to infuse any particular or new meanings onto these transcripts, but to facilitate closer readings of distinct situations. At this point,

however, I still wanted to maintain the overall structure of the empirical material and keep the transcripts intact.

Second, I went through all my notes and looked for things that struck me as particularly surprising, salient, mysterious, or common. While it might seem to encompass almost everything, it was possible to sort out quite a lot that was either irrelevant for the thesis, or things that were relevant but more about getting a rich sense of the setting than being fruitful for my analysis (many of these latter aspects became part of the next chapter). During this process, I highlighted all references to numbers and measurements, and I also made brief notes to categorise certain passages, events, or quotes. I created two kinds of categories: the first comprised *in-vivo* terms and phrases used by people in the text, such as "hot numbers", "reflect reality", "difficulties", "prisoners of numbers", "invisible illness", "the gods", “journey”, “crash”, super tricky”, spying”, "quality of life", "puzzles", and so on. The second category comprised my own summaries or 1st level interpretations, such as "tracking", "knowing and predicting", "quality indicators", "routine", “death", "definitions and ambiguity", "cost sensitivity", "myths", "importance of clothes", "patients as active–passive", "importance of furniture", "detective work", "surveillance", "goals", and "blame–responsibility". These categories allowed me to start considering different ways to thematise my material.

Third, based on my thorough reading and re-reading of the empirical material, I conducted a preliminary and holistic analysis that produced three analytical themes: *latency, contingency,* and *multiplicity*. These themes developed over time as I was in the field, transcribed my fieldnotes, read and re-read my transcripts, thought about, and discussed my empirical material with other people. Essentially, the themes provided a rough sketch that I would use to make sense of both certain parts of my empirical material but also in understanding the material as a whole. During this round of sorting, I went through all my material again and noted or highlighted all instances that connected to these three themes.

My thinking about the three themes went something like this. The latency theme proposed that numbers could have performative effects that could be latent, suggesting that numbers carried a 'performative potential', a potential that may or may not become active and realised in a social situation. The contingency theme suggested that a particular number could serve different uses and produce dissimilar outcomes based on the character of a situation and the persons involved. This theme propelled me into a more careful review of the ‘felicity conditions’ (Austin, 1962), outlined in the previous chapter. The theme of multiplicity aimed

to address the different uses, meanings, and effects that the same number could possibly have – this led me to consider the ways people could react differently to the numbers. Although this thematisation worked well, at least in principle, I found that the themes pushed the presentation of the empirical material in a direction that was too decontextualised and that my subsequent analysis was almost forcefully funnelled down to match the themes. So, I made another effort to sort my material.

The fourth time around, I decided to stick as close as possible to my empirical material and to keep my sorting procedure as simple as possible. While there were many different numbers in my transcripts, three broader categories of numbers, or "ideal types", stood out. These were medical numbers, administrative numbers, and performance numbers. However, I was not, and am not, making the point that, for example, 'administrative numbers' were purely or solely administrative. In fact, a helpful analogy can be made to Feldman and Pentland's (2003) distinction between organisational routines as 'ostensive' or 'performative' (cf. Latour, 1986). Basically, ostensive routines, or numbers, as I am applying their argument here, are abstract, generalised patterns that guide organisational action. Seen from a distance, these may seem stable and rigid, but on a closer look they may be far more malleable and dynamic as they are enacted by social actors. Performative routines – or numbers – on the other hand, can therefore be seen as the actual performances put on by people as they enact organisational routines or numbers. In other words, what I am saying here is that what numbers do, or do not do, as well as how they are used, or not used, is an empirical question.

The broader categories of numbers did, however, facilitate a neat and satisfactory way for me to sort, structure, and analyse my empirical material. Previously, I had noted down all kinds of numbers as they appeared in my transcripts. Now, I had a better grasp of my material, and I could see that there were three numbers that stood out in terms of occurrence, richness, and interestingness. So, I went through my material once again and looked for situations where these three numbers were mentioned, or used, but also situations that somehow implied the presence of these numbers. For example, one number (used in chapter 7) was a performance target illustrating the ratio between two forms of dialysis treatments. By implication, I therefore also looked for instances where performance targets and treatment options were discussed, such as follow-up meetings on performance and finance, as well as meetings between clinicians and their patients.

Selecting

The next step was to select which portions of my material to include in my analysis. The sorting of my empirical material into three categories of numbers had allowed me to carve out three distinct kinds of numbers to focus on. The first number was a medical number, the Glomular Filtration Rate (GFR), a number used to measure kidney function in people (chapter 6). The second number was a performance target, the Peritoneal Dialysis (PD) and Haemodialysis (HD) target (chapter 7). The third number was an administrative number, the Basic Hygiene and Clothing (BHC) compliance number (chapter 8). Somewhat simplified, the first step in my selection process was to copy and paste all empirical material that pertained to a particular number into a separate document for each number, which amounted to roughly 30–35 pages of transcribed fieldnotes in each document. After several rounds of iterations, the final versions of each chapter contained around 5 pages of empirical material.

My selection process was performed in two ways. The first, and simpler way, has already been implied by how I ended up sorting my material. However, this part of the process also included adding material, which is another reason for why I felt the term 'reduce' to be misleading. Hence, once I had sorted and selected the material I would use, I fleshed out a broader and more general understanding of each number. This included going looking for additional sources, both internal documents readily available at the site, but also documents found at the hospital, and at regional and national healthcare websites. I also investigated these numbers in public records and academic journals.

During the second step of the process, once I had formed a better understanding of each number and its immediate and wider context, I started to look for story-like excerpts. These were excerpts that would lend themselves well for close readings, rich interpretations, and for being presented as 'excerpt-commentary units' (Emerson et al., 2011). These kinds of excerpts often involved empirically rich social interactions. Most involved routine everyday work, such as meetings that the staff members would engage in each day and often several times per week. For example, by meeting patients or having team meetings. These excerpts tended to be story-like in two distinct ways. In the most general way, akin to stories, they tended to have a clear beginning, middle, and end. In a more particular way, many of these excerpts showed social interactions, such as between a patient and a nurse, where they would both use story-like narration as they talked. These excepts indicated the use of story-telling as a social creation made and aimed by a

performer towards a particular audience to accomplish something (Rennstam & Wästerfors, 2018).

Thick descriptions

The term 'thick description' is often reduced to suggest little more than a compulsive attention to detail (cf. Prasad, 2015). However, as suggested by Geertz (1973) when discussing thick descriptions, 'it is not against a body of uninterpreted data, radically thinned descriptions, that we must measure the cogency of our explications, but against the power of the scientific imagination to bring us into touch with the lives of strangers' (p. 18). My point is not that attention to detail is a bad thing, far from it; rather, it is only one aspect of crafting thick descriptions. To make my take on thick descriptions as simple as possible, I like to think about these as located at the intersection of two lines: one horizontal and one vertical (cf. figure 1). Basically, a sole focus on the horizontal line can be thought of as representing what Prasad (2015) has denounced as being little more than a compulsive attention to detail by those who subscribe to making thick descriptions. I tend to agree, which is why I have found the image of both a horizontal and vertical line to be a fruitful way of working with thick description.

As a heuristic, the horizontal line represents the immediate and wider context of a phenomenon, whereas the vertical line signifies more abstract interpretative work such as theoretical abstraction and a search for deeper meanings. The benefit of this heuristic in my analysis was mainly to avoid too descriptive and tame interpretations of actions and events by actively also considering the vertical line comprising depth and theoretical abstraction into consideration.

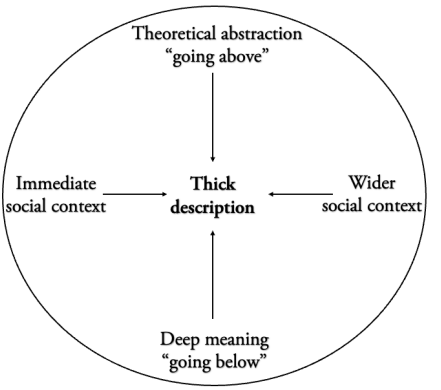

Figure 1. Making thick descriptions.

Contemporary research has frequently been claimed to be 'uninteresting' (e.g. Alvesson, Gabriel, & Paulsen, 2017; Alvesson & Karreman, 2011; Alvesson & Sandberg, 2011; Bartunek, Rynes, & Ireland, 2006). However, a more generous assertion suggests that research could be *more interesting*. It is my understanding that this quality of interestingness is chiefly derived from Davis (1971) and his

contention that for research to be interesting, it must succeed on at least two points. First, it must challenge some predominant or taken-for-granted assumption, theory, or way of seeing and being in the world. Second, it must do so in a way that is neither trivial nor absurd. Research can be trivial in the sense that the ostensibly interesting point made by the study only challenges such a tiny sliver of our social world that its point can be easily ignored. Alternatively, it can be trivial, by dressing up that which has already been paraded around for ages. It can be absurd in the sense that it completely breaks away from widespread explanations, theories, and thought, so that it appears nonsensical to an audience (if there is one, that is). Studies of this kind become either trivial or absurd. Studies that merely conform to extant theories or common-sense are rendered uninteresting.

Thick descriptions have two important implications for how research can be made more interesting. First, in line with Alvesson and Sköldberg (2009), thick descriptions imply a disposition to offer interpretations that are 'rich in points'. Second, thick descriptions are about attending to multiple and contradictory levels of meaning, as well as a *modus operandi* not to take speech or actions at face value (Geertz, 1973; Prasad, 2015; Van Maanen, 1979, 2011a). My view has been that thick descriptions are particularly important in a study on numbers. This is because numbers tend to be the epitome of 'thin descriptions' (Porter, 2012). In essence, the numbers are stripped of ambiguity and deprived of any sensitivity to their cultural and historical context (cf. Espeland & Stevens, 2008). Therefore, to understand the role of numbers in everyday life, they should be brought back into the messiness that their proponents expect, assume, or claim they have eliminated by turning these things into neat and tidy figures. Because thick descriptions rely on not accepting actions and speech at face value, I agree with Svensson (2014) that thick descriptions should go beyond – or 'above' – the empirical material. This can be accomplished, for instance, through negations employed to challenge taken-for-granted assumptions, and by acts of denaturalisation aimed at the seemingly natural and rational processes that permeate organisational life (cf. Alvesson & Willmott, 1996; Fournier & Grey, 2000). The way I see it, thick descriptions are not just about producing long and detailed transcripts of fieldnotes, but about putting these transcripts to use. I have done so through *abduction, defamiliarisation*, and *interpretative work*.

Abduction

My use of ethnography facilitated the generation of insights about the ways in which people in the field came to construct, understand, enact, negotiate, and

maintain their social realities (cf. Prasad, 2015). In line with Alvesson and Sköldberg (2009), I treated observed reality as an expression of deeper underlying processes. That is to say that interpretive and analytical work was needed to go beneath and beyond what I had observed and experienced while being in the field. Consequently, I set out to understand how some of the events, actions, and interactions I observed related to the social structures and the mental schemes that guided the thinking and behaviours of those who inhabited the field. Sometimes, what I had observed suggested to me that certain numbers placed individuals into categories that shaped how they were able to view themselves and how they were seen by others (cf. Hacking, 1982, 1986). Other times, my observations pointed me in a direction which suggested that numbers, in a broader cultural sense, symbolised a world that was fixed, knowable, calculable, and manageable (cf. Power, 2004). Most of the time, however, clear-cut answers eluded me. Breakdowns of this kind called for what some have referred to as an 'abductive' method (e.g. Alvesson & Sköldberg, 2009).

My abductive method was an iterative process involving going back and forth between a set of theories and my empirical material to reach an in-depth explanation about what was going on (cf. Alvesson & Sköldberg, 2009). Often, this process required going back into the field, to my fieldnotes, or finding additional information on the topic. This aspect of relating to my material was basically about widening what I have referred to as the 'horizontal line' (cf. figure 1 above). For example, when it came to the GFR number (chapter 6), I both engaged in a deep analysis of how the actors in the field (immediate context) related to and used the number, as well as how the number was seen and used in a broader medical context (wider context). At the 'vertical level', during an early stage of my fieldwork, I used a wide array of theories, such as communicative action (Habermas, 1984, 1987), semiotics (Eco, 1979), dramatism/dramaturgy (Burke, 1989; Goffman, 1959), structuration (Giddens, 1984), performativity (Austin, 1962), and symbolic interactionism (Blumer, 1969). Ultimately, while all of these were fruitful in their own respective way, after several iterations, it was Goffman's (1959) dramaturgy and Austin's (1962) performativity that stood out to me as a commensurate body of theory capable of generating the fullest and richest explanation about what was going on in the field. All of them did, however, play an important role in enriching my interpretative repertoire and for stretching the vertical line.

I began my analysis when I first set foot in the field. But a more thorough and meticulous analysis began after I had sorted through and selected my empirical

material. Then, I analysed my material by doing close readings. Thus, I read the same excerpts several times, each time from a different interpretative angle. Usually, I did this by asking the text questions from a particular interpretative vantage point. For example, what factors enabled or constrained the actors in this situation? How did the actions undertaken in that situation fit into the immediate and broader setting in which they took place? What kind of performances were put on in the situation, and how were they performed? What deeper meanings could lie beneath the surface of this encounter? What difference, if any, did the numbers make in this situation? This kind of analysis was continuous, iterative, and almost always involved writing and rewriting explanations and interpretations.

Defamiliarisation

Defamiliarisation seeks to transform familiar and self-evident subject matters into something that can be perceived as strange and exotic (Alvesson & Deetz, 2000). I approached the seemingly ordinary and mundane aspects of healthcare work and its organising as being 'exotic' and as a cause for curious exploration. Indeed, as Bate (1997) declares, citing Proust 'the real voyage of discovery begins not with visiting new places but in seeing familiar landscapes with new eyes' (p. 1148). When I was in the field, I would ask myself and others about all sorts of seemingly 'obvious' things. In a way that was not so difficult, given that hospitals are very strange places. For example, why do so many people walk around dressed like they are about to colonialise Mars? Why is there such a difference between who wears what? Who decides what to wear? What is the meaning of their clothes and what is the meaning of that meaning? Questions of this kind, I found, were also a good tool for counteracting naïve, common-sensical, and stereotypical preconceptions about things. For example, about professional groups such as nurses and their supposed affinities, value systems, and aspirations (cf. Blomgren, 2003).

Most of my observations revolved around routine work, mundanities, and repetition. Almost all my observations, however outlandish they appeared to me, were routine everyday work for those I observed. For example, much of my fieldwork involved me sitting and walking alongside nurses who worked on their computer, made, or received phone calls, and met with patients. Other observations included regular workplace meetings, administrative work, making plans and schedules, as well as having breakfast, lunch, and coffee breaks. Young (1989) argues that it is through mundanities that organisational cultures come into being and use. Barley (1983) also stresses that it is not only overt symbols that can be analysed in cultural studies, but that seemingly trivial things such as

chairs, air, and sunlight can act as powerful symbols. Moreover, Forrester (1992) highlights that most routine social interactions reproduce relations of 'social belief, consent, status and attention to problems' (p. 50). Indeed, the structures by which society is organised and the agential properties of people are revealed through ordinary actions in regular situations (e.g. Goffman, 1959, 1974).

Interpretative work

Interpretations do not need any justification, as they make up an ever-present and unescapable fact of life (Culler, 1992). At the same time, as Geertz (1973) says, 'you either grasp an interpretation or you do not, see the point of it or you do not, accept it or you do not' (p. 26). Yet, be that as it may, the kinds of interpretations we make, and the way we make them, are worth discussing. I was originally inspired by Svensson (2004) and his use of wild and tame interpretations. Basically, while I agree with his distinction, I will add another layer, namely the domesticated interpretation. I do this to better position myself for an argument aimed at illustrating the processes by which an interpretation moves from *wild*, to *domesticated*, to *tame*. In so doing, I wish to make the case for having included wild interpretations in my interpretative repertoire. This naturalistic metaphor is somewhat paradoxical because, on the one hand, taming and domestication are unnatural processes. On the other hand, an implication of my argument is that as far as interpretations go, we seem to have a "natural" or deep-rooted predisposition to tame and domesticate them.

A tame interpretation is fashioned and formed to fit and suit some particular thought pattern, theoretical structure, or moral programme. It breaks no rules, crosses no boundaries, and challenges no one. It does so by virtue of being tame. Like tame animals, tame interpretations have gone through so much work that they no longer resemble their wild counterpart. ln research, this can mean that an interpretation has gone through a more or less strict theoretical framework, rigorous methodological process, peer-review, supervision, a process of self-criticism, doubt, or a fear of stepping on anyone's toes. What is left is often a pristine, but boring interpretation. Such polished interpretations make sense, but they may offer little towards an increased or challenged understanding of a particular phenomenon. What is more, these tame interpretations may be so polished and accomplished that they leave little room for readers to make new or different interpretations.

A domesticated interpretation is more of a process than a fixed result. When we make interpretations, these tend to pass through a 'filter' where they either "fit"

into a particular form or are moulded or assume a particular shape. In other words, the wild interpretation has been tracked down, reeled in, and trained in order to perform in accordance with some particular way of being. Now, my contention is not that tame interpretations are corrupt or flawed, but that they represent just one out of several interesting interpretative possibilities. The process of domestication, I argue, has a methodological and pedagogical value in so far as it can highlight how a particular interpretation has been 'tracked' down, 'reeled' in, and 'trained'. The point is that our interpretations do not just pass through a process that adds richness, nuance, or complexity. But that they also pass through a filter, which removes features or aspects that may be deemed or assumed to be too taboo, stupid, un-academic, problematic, and so forth. Exit creative and generative ideas, enter safe and well-established trains of thought.

A wild interpretation is unpredictable, unexpected, and perhaps even startling. Wild interpretations, at their core, are interpretations that have escaped domestication in the form of self-criticism, doubt, fear, or anything else that puts constraints on one's creativity and imagination. This line of reasoning finds support in Freud (1913), who argues that the main task of the observer (the dreamer in his example) is to suppress self-critique and deter the violent resistance that often prevents undesirable ideas from reaching the surface. He goes on to cite Friedrich Schiller, who, in response to a friend's self-perceived lack of creativity, had this to say:

> The reason for your complaint lies, it seems to me, in the constraints which your intelligence imposes upon your imagination […] It does not seem beneficial, and it is harmful for the creative work of the mind, if the intelligence inspects too closely the ideas already pouring in, as it were, at the gates. […] In the case of a creative mind, however, the intelligence has withdrawn its watchers from the gates, the ideas rush in pell-mell and it is only then that the great heap is looked over and critically examined […] Hence your complaints about barrenness, for you reject too soon and discriminate too severely (Letter dated 1 December 1788, cited in Freud, 1913, p. 77 f.).

I have intended for wild interpretations to possess a certain ambiguity, insofar as they, on the one hand, represent an untethered interpretation that has escaped the process of domestication. On the other hand, wild interpretations also represent a particular kind of observation that is wild in terms of its outcome, rather than its process. This latter meaning of 'wild' resembles what may be referred to as 'overinterpretation'. Similar to Culler (1992), I find overinterpretations to be among some of the most interesting kinds of interpretations. They are also

particularly fruitful for making new connections, coming up with novel ideas, and for taking a critical stance towards one's empirical material (cf. Svensson, 2014). Culler (1992) offers a quite practical guide for making overinterpretations. In doing so, Culler writes about texts, but I see no reason why "texts" cannot be used as a metaphor for all forms of social actions, such as conversations, interactions, and events (cf. Prasad, 2015 p. 39). In his defence of overinterpretation, Culler (1992) argues that the questions to ask a text are these: 'What the text does and how: how it relates to other texts and to other practices; what it conceals or represses; what it advances or is complicitous with' (p. 115).

This thesis is not full of wild interpretations. That is not the point I am making here. Rather, I have used all kinds of interpretative work to push the boundaries of interpretative possibilities that have laid before me to 'open up' the phenomena at hand. However, whenever possible, I have tried to push towards the wildness, at least in early drafts. This is to prevent the tameness of some interpretations from becoming limiting and naturalised in ways that risk rendering the material one-dimensional, narrow, and thin. Put differently, wild interpretations have been helpful in mitigating the negative effects of interpretative domestication, and breaking free from too tame interpretations – or, in other words, uninteresting stuff. That being said, in line with Davis' (1971) notion of interestingness, you are not about to venture into the wild where the crazier the interpretation, the better it is; that would be absurd! Instead, wild interpretations have made up an important part of a larger interpretative process that has facilitated a more creative, reflexive, and interesting research output. Ultimately, however, what makes research interesting is, at least to some degree, a subjective assessment made by those who read it (cf. Bartunek et al., 2006).

Summary

This is an ethnographic study conducted over a two-year period at a Scandinavian hospital, specifically at a Renal Care Unit (RCU) and an Administrative Unit (AU). Although five interviews were conducted at the beginning of the study, almost all empirical material used stem from participant observations. Fieldwork was described as observations that entailed workplace shadowing, hanging around at the site, and conducting focused observations. These observations were generally of mundane aspects of work, such as routines, meetings, and various forms of everyday work. All in all, 112.5 hours of observations were completed,

which amounted to about 250 pages of transcribed fieldnotes. The study involved 75 participants, whereby only 18 remain in this version as degendered pseudonyms. Textwork was outlined as a process involving taking fieldnotes, transcribing, and making accounts. All empirical material was carefully sorted and selected to accommodate close readings and rich interpretations. Close readings were described as an abductive process, by going back and forth between empirical and analytical insights, such as by shifting interpretative lenses in an iterative way. Thick descriptions and defamiliarisation were also described as key aspects of the analysis.

CHAPTER 5
WORKING WITH NUMBERS

Introduction

The empirical setting for this study is a renal care unit (RCU), and to a lesser extent an administrative unit (AU), at a Scandinavian hospital. The hospital employs over 3,000 people and has around 350,000 patient visits per year. The RCU comprises a group of specialised nurses, doctors, assistant nurses, and medical secretaries. In contrast, the AU hosts a wide range of staff members and professional groups – such as accountants and legal officers, as well as medical doctors and nurses who have assumed administrative roles within the hospital.

Many work tasks at the AU, especially among the financial controllers, involve gathering, analysing, compiling, and presenting the various performance- and production numbers from different care units and areas of activity. These numbers are typically presented, discussed, and evaluated at meetings, such as follow-up meetings, which range from individual care units to the hospital's board of directors. It has been during meetings of this kind that I have made my observations within the AU.

The RCU deals with chronic kidney disease (CKD). The treatment for CKD varies, but it is not uncommon for a patient's entire life to become framed in terms of the illness. Certain parts of life may become limited because of the illness and because its treatment requires regular hospital visits and everyday considerations, such as a change of diet, daily habits, exercise, and travel constraints. There are basically four kinds of treatment for CKD. The first form of treatment generally involves lifestyle factors, such as a change of diet, weight loss, and exercise. The core idea of this treatment is to impede the progression rate of a person's failing kidney function. The second and third forms of treatment are two kinds of dialysis: peritoneal dialysis (PD) and haemodialysis dialysis (HD). At the fourth

level of treatment is transplantation, yet not all patients are eligible for a transplant.

On average, the RCU receives about thirty new patients per year, but the uptake is irregular. Some years, there is almost no uptake, while in other years, the uptake is much higher. Almost all care and organisational structuring of the RCU can be related to a particular measurement: the glomerular filtration rate (GFR). In a few words, the GFR aims to measure and reflect a person's kidney function as a percentage ranging from 0 to 100. Subsequently, the GFR allows clinicians to place individuals within a certain scale between 1 and 5, which, in turn, informs treatment, medication, and priority, amongst other things. Members of the RCU closely monitor the GFR values of several hundred kidney patients who have a high degree of kidney failure – or conversely, an increasingly lowered kidney function.

The hospital shares issues that are salient in widespread discourses about the state of healthcare organisations. Everywhere, it seems, it is claimed that the patient uptake is too high to handle (Holm, 2019; Skagerlind & Sima, 2018), and that there are not enough nurses or doctors (Larsson, 2019; Ström, 2018). The working environment is claimed to be poor and problematic for patient safety (Kallin, 2017), and that the organisations are riddled with administrative burdens (Persson, 2019). In all cases, there are corresponding numbers that ought to be improved or maintained – lowered costs, fewer patient uptakes or redistributions of existing patients, more staff to be hired, increased funding, higher work environment ratings, and more favourable indicators of efficiency. At an overarching discursive level, this is also the case and context in which this study finds itself.

This chapter has two parts. The first part details *everyday work* at the RCU and describes the organising of care and treatment at the RCU, including the groups most salient routines, computer work, phone work, and care production. The second part discusses and examines the physical, symbolical, and social *work environment* of the RCU.

Everyday Work at the Renal Care Unit

When I first met the nurses at the RCU, I told them about my study and my interest in the role of numbers within the RCU. A few of them seemed largely

indifferent, others were curious, and some asked me 'why them?' because 'they did not have anything to do with any numbers'. Instead, they said, 'they worked with people'. So it goes. But how intriguing it was since so much of the everyday work, talk, and activities that I would see and hear them perform would involve numbers. Hence, in this world of numbers, how did the nurses and their patients relate to numbers? How did they use them? And what did the numbers do? These are the questions that I turn to in the upcoming chapters. In this chapter, I provide a glimpse into this world of numbers and to the people who inhabit this world.

During my fieldwork, I mainly observed the nurses at the RCU, especially the CKD nurses. Nonetheless, many of my observations and the nurses' interactions within the RCU include other clinicians and members of staff, such as doctors, managers, assistant nurses, and medical secretaries, as well as, of course, patients. Simply put, the everyday work activities of the nurses chiefly include planning and performing non-invasive treatments, test-taking, and health check-ups, all while continuously keeping their patients informed about their health status and treatment options. The doctors at the RCU take turns working so-called 'support hours' once per week, and by meeting with patients during scheduled visits. Assistant nurses assist with specific medical tasks and perform administrative work, such as entering data into the national quality registries and keeping an inventory of the equipment. Medical secretaries perform different kinds of administrative work, involving creating work schedules, scheduling appointments for patients, and transcribing Dictaphone recordings made by the doctors.

Much of the regular everyday work at the RCU consists of sitting in front of computer screens, talking on the phone, meeting with patients, and attending team meetings and meetings with other staff members at the hospital. Moving forward, I will describe and elaborate on these aspects of the empirical setting that concern everyday work at the RCU as I have observed them. In other words, this part of the chapter focuses on what the staff members at the RCU do during their everyday workdays. In doing so, I will differentiate between five aspects of their everyday work: *patient work, routine work, computer work, phone work,* and *production work*. Thus, in contrast to the nurses' claims that they do not have anything do to with any numbers, I will show how each aspect of their everyday work activities involves them working with numbers.

Patient work

Work at the RCU is about managing and treating CKD among patients enrolled at the care unit. Daily activities are essentially organised into four stages associated with treating CKD. During the first stage, the patient is diagnosed with CKD, which means that he or she has a deficit in the renal function that is getting progressively worse. Usually, a *prima facie* diagnosis is made by the patient's primary care physician, who then sends a referral to the RCU where the doctors make a formal diagnosis. Such a diagnosis is essentially made by determining the patients' GFR value and how quickly it is decreasing.

At this initial stage, most work tasks are performed by the CKD nurses. Their core task is to monitor the progression of the patients' renal function and guide them in making decisions aimed at slowing down the progression of the disease and preserving their kidney function for as long as possible. In principle, the CKD nurses strive to keep their patients continuously informed about their illness, treatment options, medical indicators, and relevant measurements. The nurses do this by means of continuous test-taking and by monitoring their patient's test results with a variety of IT-systems through which they can track, trace, and assess the GFR value along with an array of medical numbers.

During the second stage, the CKD nurses start to prepare their patients for their upcoming treatments. These informational meetings are usually held when the patient's GFR value is below 30 – usually around 15–20. The CKD nurses start to educate patients about what it means to perform peritoneal dialysis, which the patients later perform on their own, or what it means to enter haemodialysis (HD), which is performed at the dialysis ward. In principle, one or more meetings are held between CKD nurses and patients with the expressed purpose of informing them about their treatment options.

During the third stage, the patient undergoes dialysis treatment – as HD is performed at a separate care unit (the dialysis ward), I omit further descriptions of everyday work there. Although PD is a treatment that is performed by the patient in his or her home, it still requires work from the PD nurses (and the doctors). The everyday tasks of PD nurses mainly involve practical training and regular guidance. Each patient who is about to be enrolled in PD treatment receives individual training sessions lasting anywhere from a week to a month. The PD nurses also have on-call phone duty throughout the day in case their patients need assistance. They also make regular home visits to their patients. Because they often make such home visits, and do so in pairs, their phone hours

are often seen as a burden by other nurses who often must help to answer the phones while their colleagues are having training sessions or home visits.

At the fourth stage, patients may be eligible to receive a kidney transplant (TP). Although the hospital does not perform transplantations, receiving a transplant is a difficult procedure, requiring a nurse to coordinate with the medical staff at the hospital where the transplantation will be performed. This kind of work is performed by TP nurses. These nurses also guide and assist their patients through the often difficult and burdensome actions needed to qualify for a transplant. Notwithstanding the time it takes to find a donor, a transplantation is normally prefaced by an investigation that lasts for about half a year. This investigation aims to ensure that the donor and recipient are compatible, and that nothing speaks against a donation. TP nurses support their patients in their attempts to remain healthy and in good shape to maximise their chances of being able to receive, and go through, a transplantation. After receiving a transplant, due to a significant risk of infection and other medical complications, TP nurses coordinate and assist with the patient's care with other care units.

Routine work

Much of the work done at the RCU is ingrained in a distinct set of routines. Each day starts off with a meeting among the nurses to map out and plan the day ahead. Due to the ever-present risk of assault and physical violence, if the PD nurses have home-visits to make, it is generally agreed that they should undertake these visits together with a colleague. It is also established during these meetings that there should be a nurse working at the RCU during the day, to whom the PD nurse should report back after making a home visit. After the morning meeting, the work shift starts and continues for about three hours until ten-o-clock, when a coffee break ensues. Work resumes until lunch at around twelve. At two or three o-clock, there is usually another coffee break. While these breaks allow for some rest and recuperation, they also offer opportunities for the nurses to discuss actions and decisions together in a group, and occasionally allow them to seek advice from the doctors on a somewhat more informal basis.

Every Tuesday, there is a workplace meeting. During these meetings, the unit manager provides general information and updates, potential grievances can be raised and addressed, long-term plans made, instructions discussed and revised, and around-the-table updates shared by those present. All members of the RCU are expected to participate in these meetings (the doctors are not formally part of

the RCU). The meetings are generally held in the canteen, within an area that can be separated from the rest of the dining area by folding out a sliding door from one side of the room to the other – thereby separating the 'meeting room' from the rest of the canteen. These meetings are not particularly secluded and people who enter the canteen from any of the neighbouring care units can, and do, frequently pass through during these meetings. In a sense, this meeting space manifests an underlying sentiment that the work at the RCU is transparent.

Almost all work tasks or events have a corresponding and often detailed instructions or promemoria. Almost anything imaginable, from the event of an accident or assault, to work tasks and scheduling, has a set of detailed instructions. For example, in one of my observations, I took part in a round of check-ups where an assistant nurse walked around the RCU to ensure that everything related to fire safety was in order. She followed a detailed instruction manual for how to perform this check-up, where to go, what to look for, and how to assess that everything was in order. During this round, we came across a set of numbered instruction cards that told its reader exactly what to do, whom to call, what to say, and where to go in case of a fire. Hence, there is a wide collection of instructions, including even instructions for how to prepare new instructions.

Computer work

A substantial portion of everyday work at the RCU is computer work. That is, work that the staff members perform with their computers in front of a monitor. Working on the computer generally involves some variation of data administration – such as scheduling appointments, filling in data into any of the many national quality registries, registering medical data, making journal entries, or filling out drug prescriptions. Much of the discussions with the doctors also take place through the IT-system used for patient journals. Computer work is a prevalent part of the daily routine, and it is not uncommon for a nurse to spend an entire day at the computer – though most nurses express a certain disdain for such days. Although certain patients can be ill-mannered or difficult, the nurses usually expressed a preference for seeing patients over doing computer work. Nonetheless, at least two to four hours per day are spent in front of the screen doing computer work.

The CKD nurses, medical secretaries, and assistant nurses make frequent use of sheets of medical data that essentially look like large Excel-sheets with the names of patients, a huge array of medical numbers, and the dates on which the

corresponding test for each medical number was made. What the nurses do with these numbers is perhaps best described as a kind of detective work. Essentially, they use these sheets of data to check for anomalies or surprising numbers. They do so by going back and forth between some particularly mysterious medical number, or set of numbers, and the notes made in the patients' journal to understand and make sense of the numbers. However, computer work is not only about 'detective work', but it also entails a fair share of administrative work, such as scheduling appointments, rooms, and meetings, as well as entering data into quality registries.

The medical secretaries and assistant nurses, on the other hand, use medical numbers, especially the GFR, to sort patients into different groups for administrative purposes. While the computer work performed by the nurses often resembles a kind of detective work, the medical secretaries often speak about their computer work as solving puzzles. For example, they must often work out and schedule doctor's appointments for patients within the often-busy schedules of the doctors. Additionally, they must ensure that patients are able to get a meeting within the 90-day timeframe required for the hospital to be eligible for the so called 'queue billion' – a financial incentive awarded at a national level and paid out to regions that manage to reduce or maintain a guaranteed queuing time of less than 90 days after seeking aid.

The work carried out by nurses on their computers is complex and involves tacit knowledge, making such work appear highly routinised, to the point of almost seeming mechanised. For example, as a layperson, at a first glance, I quickly browse the computer screen from top to bottom. At one point during my fieldwork, I observed a computer screen that showed the medical journal of a patient. When doing so, I noticed that, at the bottom of the page, it was stated that the patient in question was deceased. The nurses, however, typically do not go through the journals in this lay manner. Instead, each step seems to be meticulously enacted in a sequence of events that is almost always the same. Usually, they start at the top corner, where the patient's name and social security number are stated. Before going further, these details are compared to and cross-referenced with information obtained from printed documents and other IT-systems. For reasons such as these, it can take up to five or ten minutes of working on a patient's file, and preparing a summoning, before the nurse, as in the example above, may realise that the patient is already deceased.

On a side note, death is usually nothing out of the ordinary at the RCU. On the contrary, death is a significant and common part of the job. This is, in part,

because CKD is a serious and life-threatening illness. Moreover, many patients are either very ill, of old age, have multiple illnesses, or a combination of these factors. In relation to not having any waiting times, a senior physician at the care unit once told me:

> If I am to be a bit cynical, we do not have any waiting list, because those who would be on such a list would be found at the cemetery.

The death of a particular patient is a common topic of discussion during everyday work, team meetings, and lunch or coffee breaks. Although certain deaths may be particularly shocking and cause profound grief, death is also a routine part of the job. However, many of the nurses meet with their patients on a regular basis and sometimes form long-term relationships.

A key term that nurses look for and investigate in the journal system is the patient's monitoring date. This date informs the nurses of the last date when a patient should have had a medical examination, check-up, or doctor's appointment. If the date has passed, it could mean either of three things: the patient is dead, forgotten, or terminated – that the patient is terminated means that his or her treatment has ceased. There can be several reasons for one's treatment ending, but without some form of treatment, end-stage renal failure is fatal. If a nurse sees a monitoring date past its due date accompanied by a low GFR number, the patient is assumed to have died.

Phone work

Phone work is ubiquitous at the RCU, that is, making and receiving phone calls is a large part of their everyday work. It is a rare occurrence for a phone to not ring during lunch, a coffee break, or a meeting. In this sense, many nurses are almost always on the clock, figuratively 'on-call', and quite often literally on a call.

Phone work takes different forms, but most of it can be summarised as being either structured or unstructured. Structured phone work essentially consists of regular phone hours that are scheduled for a few hours each day, with nurses generally taking turns. For CKD nurses, this kind of work is scheduled for one hour before lunch and one hour after lunch. A particular phone is used and opened for outside calls, which are transferred through a switchboard. This line is dedicated to questions that are easy enough to answer on the phone but difficult enough to warrant the time and expertise of a specialised nurse. PD nurses have dedicated phone hours spread throughout the day. Similarly, as much of the work

done by the TP nurses involves coordination, they spend much of their time on the phone with patients and other healthcare providers.

Unstructured phone work consumes a significant portion of the nurse's time. There are usually two kinds of unstructured phone work. One type involves calls made to the nurses by their patients who have questions about their latest test results, medication, or next appointment. These calls typically involve rather easy tasks, such as finding the patient's test results on screen, reading them aloud, and often commenting on them. Nurses also provide the patient encouragement and advice. For example, on what to eat and what not to eat or on the value of taking short walks throughout the day.

The other kind of unstructured phone work are calls made by nurses to their patients or the patients' doctor. These calls tend to be a bit more complicated than when the call order is reversed. Generally, these calls are made after a nurse has found something unusual in the patient's test results or medical journal that they are unable to understand or account for. In these cases, like much of their computer work, a kind of detective work is initiated by the nurse in making sense of the unexplained. Calls like these tend to be inquisitory in the sense that the nurse probes the patient about a variety of factors, such as his or her eating, sleeping, or exercise habits, that may explain a particular medical number and how it has changed – or stayed the same. This kind of inquiry relies on a vast knowledge of how a variety of lifestyle factors can influence an array of medical values, such as vitamin levels, blood pressure, blood value, creatinine, and so on.

Production work

All work conducted at the RCU should, ideally, be part of the unit's care production. Nurses have discretion and leeway when it comes to planning and performing their work. At the same time, almost everything they do has to, or at least ought to, be recorded and accounted for. In everyday talk, this is what is meant by care production, that is, that they engage in 'production work'. Although care production is an ever-present aspect of everyday healthcare work, it is never as evident as it is in situations that need to be manually recorded as part of the production of care. For example, when a patient decides to drop by the care unit without notice or having made an appointment, or when a call is made to any of the nurses outside of the switchboard system, which records the number of calls and thus transforms these into one aspect of the unit's care production. In the everyday work sense of the word, care production includes activities that have

been registered for the nurses, medical secretaries, or doctors to formally account for their time.

Where there is a system of production, there tends to be a product. The product of the RCU can be thought of in terms of two separate but interwoven systems. On the one hand, the 'product' is the organisational accomplishment of the tasks assigned to the RCU by the hospital, which, in turn, is accountable to the government. These tasks being related to ensuring high-quality care that is equitable and accessible to all citizens. From this perspective, production can be thought of as all work aimed at ensuring and reflecting an efficient, cost-effective, safe, equal, and accessible care organisation. In practice, this boils down to the creation of systems of measurement, and the act of counting, aimed at showing a level of excellence – or insufficiency – in numbers. These measurements are produced and evaluated by financial controllers together with unit managers and, on an aggregate level, by senior management. Thus, one of the chief products of the organisation is the organisation itself.

Another aspect of care production is viewing the patient as a subject to be worked on. The term production connects to a metaphor of the human body being akin to a machine. Essentially, there is a long-standing tradition in medical philosophy to view and treat the body as if it were a machine (Wulff, Andur Pedersen, Rosenberg, & Persson, 1992). When it comes to everyday work at the RCU, the work conducted by nurses is suggestive of what Goffman (1961) calls 'people work'. This refers to individuals who work on other people as their products, such as in healthcare, schools, and prisons. For nurses at the RCU, people work often takes place without their patients being physically present, using the GFR and an assortment of other medical numbers. As a product, the patient is transformed into a set of numbers and an array of tangible measurements available to staff members to account for this kind of 'production'. Among the most salient measurements are those concerning the patients' self-perceived quality of life and care, along with cure-rates, waiting times, estimates of life-prolonging treatments, and various care-related quality indicators.

Work Environment

The work environment is an important part of the setting. By work environment, I am referring to the ways in which people talk and what they talk about, the artefacts and symbols that seem significant in their milieu, and what their physical

surroundings look like. It also has a secondary meaning. That is, the social and emotional challenges that staff members face on a regular basis. In essence, my account of the work environment is an attempt to describe and reflect on the everyday work life at the RCU.

Physical environment

Amidst the city stands a family of large grey buildings. Among them, as the odd bird out, is a white four-storey building. During my time in the field, most of the grey buildings were covered with scaffolding, and pathways that once allowed people to travel from one building to another were closed off by fences. In their place, maze-like paths had been carved out. At this point in time, a decision had been made to re-construct the hospital buildings. Throughout my study, the construction work was often referred to as 'the biggest problem the hospital and its staff members were facing at the time'. At least this was often the story espoused by different managers whom I often suspected enjoyed having the spotlight shifted from their own alleged shortcomings onto the local politicians responsible for the construction. Indeed, while many nurses viewed the construction work as problematic, their expressed concerns were mainly for the many patients who struggled to move from one building to another.

After a series of setbacks, political turmoil, and significant over-expenditure, the construction work was halted. A large consultancy firm was hired to launch an investigation into what had gone wrong and to calculate what it would take to complete the project. By the time I withdrew my presence from the field, the investigation had concluded that the cost of the project would exceed the originally proposed budget with at least ten times the amount. Moreover, the investigators argued that the construction work would still not solve or ameliorate most of the issues the project originally set out to amend. A few months later, it was decided that the hospital would be built anew somewhere else. Yet, this remains the setting in which work at the RCU takes place.

Inside the large white building – once erected to serve as a temporary care facility until the hospital's new and renovated buildings would stand complete and ready for use – lies the RCU. Its interior chiefly consists of corridors, offices, and examination rooms. These offices are used by staff members, mainly the medical secretaries and nurses. In addition, they also make up space for supplies and equipment. The office rooms feature doors with large see-through glass panels that make it easy to look in – yet it is uncommon to find these doors closed. All

examination rooms are located on either side of the main corridor, which divided the space into two parts. The examination rooms resemble "boxes" made up of four rooms arranged side by side. These rooms have frosted glass panels that are meant to impede vision and stop people from seeing what is happening inside. The soundproofing, on the other hand, is poor, and it is possible to overhear conversations from one room to another if someone is speaking loudly – or if one listens attentively from the outside.

Examination rooms

Staff members frequently claim that they have outgrown the building, and that there is often a lack of space and available rooms. Together with two other care units: gynaecology and infectious disease, the RCU shares the second floor of the building. Nurses and the medical secretaries spend a significant amount of time on scheduling and reserving rooms for doctor's appointments, patient visits, or examinations. The medical secretaries schedule rooms and appointments for the medical doctors, while nurses must schedule their own rooms and appointments.

Most nurses use the administrative system available to them for making room bookings. However, there are some nurses who rebel against the system by taking a more *laissez-faire* approach to the formal booking system. They do so by placing the fate of their appointments in their ability to find an available room when they need one. Some see this as a necessary and pragmatic approach; most see it as being unsupportive and careless. It is particularly common among some of the doctors to claim a room regardless of its status as booked. In these cases, the nurse who had, in fact, booked the room generally must surrender the room. If a nurse occupies a scheduled room, he or she is usually confronted and asked to find another room.

The examination rooms have been furnished in ways that pay a surprising amount of attention to detail. I have been told that the examination rooms have been designed and structured in a way that makes it an unnatural posture for a doctor or nurse to have their backs to the patient while facing the computer screen available in the room. Before, I was told, the work desk in the rooms was placed at the far end of the room, where the nurse or doctor would sit and face both the computer screen and the patient. The patient would thus be seated on the opposite side of the desk, closer to the door. Now, however, the desks have been placed on the side of the room, with the chairs for the medical professionals positioned near the door. The chairs assigned to the patients have been placed at the far end of the room. I have been told that this setup accomplishes two things.

One being that the clinician must turn away from the patient to view the computer screen, rather than facing it directly – and thus, potentially being suspected of favouring the screen over the patient. The other reason is to prevent physical and sexual assault and avoid situations where a clinician risks becoming trapped in the room. Notwithstanding such a deplorable scenario, it is perhaps worth considering the assumption that it is the clinician who needs protection against the patient and not the other way around.

Clothes

The clothing worn by medical staff members bestows upon them a manifested belonging to the medical profession that separates them from non-members. The first thing one notices upon entering the hospital environment are all the people clad entirely in white, from top to toe, while wearing comfortable looking sandals or sneakers. The strangeness of so many people walking around all dressed the same is striking in this setting. By virtue of their distinctive clothing, medical professionals are set apart from administrative or managerial staff, patients, and civilians. To an outsider, it is difficult to distinguish between a nurse and a doctor based on their clothing, which sometimes causes confusion and dissatisfaction. For example, many members of the RCU have shared scornful anecdotes about how female doctors are frequently mistaken for nurses, while male nurses are perceived as doctors. For those not so well versed in the etiquettes of healthcare clothing, nurses wear white shirts and trousers, while doctors tend to wear full-length white coats.

Wearing essentially identical clothing as everyone else tends to place significant restrictions on the ability of one's clothes to serve as a tool for maintaining and constructing a distinct identity (cf. Pratt & Rafaeli, 1997). Since all healthcare professionals must wear strikingly similar clothing, accessories like socks, nametags, and stethoscopes offer a means for these professionals to distinguish themselves in terms of their outward appearance. At the RCU, colourful nametags and socks are commonplace. Some of my informants have mentioned that these accessories perform as an extension of their personalities and identities – these things say something about who they are. That is, one's socks can act as an identity marker that aids its wearer in his or her presentation of self. Other times, accessories can be used to establish and convey a particular persona that one deems to be purposeful in a certain context or situation. For example, one of the doctors once came in to the RCU wearing a pair of particularly striking yellow socks with smiley face icons on them. Within the RCU, this doctor is known as being a grumpy person. When asked about his socks, the doctor said that he only wears

them when he is working at the RCU and meeting patients. He went on to say that 'at the kidney department, nobody would notice them, so there would be no point in wearing them there'.

Frontstage and backstage regions

The RCU is an open care unit, so patients can, and sometimes do, pace around the corridors – although most wait in a waiting area assigned to them. While the doors to the examination rooms are usually closed, the office doors tend to remain open. Given that most patients have close contact with their nurse, it is common for patients to drop by the nurse's office and pay them an unexpected visit. There are three nurse's offices: one room is shared by the PD nurses, another by the PD nurses, and a third by the TP nurses. Because of the ever-present chance of receiving unexpected visits, and having shared office rooms with open doors, the RCU can generally be seen as a frontstage region. That is, it is an area where the impressions of others often need to be managed, or certain aspects of oneself or one's views need to be suppressed.

As previously mentioned, frontstage and backstage regions are dynamic and changeable. Although the office rooms can often be seen as frontstage regions, this perception is largely dependent on if the door is open or closed. For example, it is not wholly uncommon for nurses to sometimes close their doors and engage in gossip, criticism, or bad-mouthing. Thus, these doors often act as a way for the nurses to pull back behind the curtain to enter a region where they can talk frankly with one another. However, these regions and how the nurses move between them are not only dependent on the physical setting but also on the role they are performing, and on the footing from which they speak or act.

During phone calls, it is not unusual for nurses to speak in a certain way, such as in a gentle, calm, and understanding manner, while at the same time making faces, gestures, and even notes that suggest that the nurse has an opposing viewpoint to what is being expressed over the phone. Even when this is not the case, after a call has ended, one's personal fronts are often abandoned, and backstage feelings are expressed. For example, during one phone call I observed, a patient had consistently failed to take his prescribed medication. His nurse urged him to take his medication more seriously, but quickly assumed a gentler and understanding tone and told him that it can be very difficult but that he was generally doing a fine job and had to keep trying. After the call, however, the patient was called an 'idiot', and several examples were given about other personal flaws and mistakes.

Thereafter, a note was made in the patient's journal stating that the patient had 'difficulties taking his medication'.

The canteen has often represented a backstage region where members of the RCU have been sheltered from outsiders. To enter the canteen, one needs to have an access card or be allowed entrance by someone with access. In general, the canteen is an area where only staff members, or sanctioned participants, are allowed and where more formal behaviours, typical in frontstage regions, tend to be suspended. In this region, conversations are often informal, personal, and about one's free time and leisure activities. It is also an area where frontstage performances can be raised and discussed, and where the behaviours of patients can be discussed, as well as how staff members can react to such behaviours.

Psycho-Social Work Environment

In this final part of the chapter, I describe the psycho-social work environment of the RCU as I have observed it. I will focus on three aspects of this part of the work environment: patients, phones, and talk.

Patients

Almost all work at the RCU involves working on, or interacting with, patients. Many patients at the RCU have one or more of these combinations: old age, high blood pressure, diabetes, heart or vascular disease, obesity, and a habit of smoking. Regardless of the veracity of such views, many of the challenges faced by the patients can be seen as a result of bad habits and poor lifestyle choices. In fact, nurses often express such views about some of their patients when they are not around to hear. Despite harbouring judgemental and moralistic views, most nurses have told me that they usually form good and enduring relationships with their patients. These relationships, I have been told, are often the part of the job that many nurses enjoy the most. At the same time, these relationships can be burdensome in at least two ways when it comes to the psycho-social work environment at the RCU.

In many cases, nurses and their patients have formed close bonds over years of regular hospital visits, phone calls, and – in the case of patients on PD – frequent home visits. However, given the severe and progressive nature of CKD, along with

what is often a combination of other serious illnesses and old age, it is not uncommon for patients at the RCU to die. Sometimes, the death of a patient can be expected, such as when old age and serious illnesses amass to a point of no return. Or, as in one example, when a patient tried to persuade one of the nurses to travel with him to Switzerland to receive euthanasia. Other times, death may come unexpectedly, such as when a woman in her fifties, whom one of the nurses had formed a friendship with, suffered a sudden and major brain aneurism by the end of the work week and died during the weekend. During such times, it becomes evident that the tight connections sometimes formed between a nurse and a patient can tear open an emotional wound for the nurse, who may have to pay a high price for getting 'too close'.

Other times, clinicians may wish nothing else than to be rid of a particular patient – although they probably do not wish them dead. In these cases, meeting such a patient can be seen as being 'a work environmental problem', as suggested by one of the doctors, who used an analogy to the issues facing road workers in their toiling.

> When a road worker performs his work, there are associated work environmental problems, like steam coming from the asphalt, or the injuries that can be caused by operating a hammer drill. Here, it's the patients. To meet this patient [name] is a work health issue. Why should I have to do that?

Exactly what it is that makes a patient a 'work environmental problem' depends on the clinician's temperament and personal disposition. However, there are certain acts that generally make an interaction difficult and problematic. Some patients, as I have witnessed, can become very angry, and although I have not observed any threats directly, I have often been told about various kinds of threats. The most common being that a patient threatens to commit suicide. Through hearsay, I have often been told of threats and acts of physical and sexual violence. Other times, patients may behave in a misogynist manner, or, for religious reasons, refuse treatment from women or men, depending on the patient's sex. Such refusals often make life difficult for the clinicians and are not well-liked – however understanding and accommodating one may be or make efforts to appear to be. Other times, it can be the family members of a patient who cause trouble for the staff members.

Phones

Earlier, I mentioned phone work as a salient feature of everyday work tasks at the RCU, and indeed it is. The phones used by staff members, especially by the nursing teams, can also be seen as symbolic artefacts. Typically, nurses would have at least two phones each: their personal phone and shared office phones that are tied to their role within the RCU. That is, the CKD nurses share a phone for calls made to them about CKD, the PD nurses share a phone for calls about PD, and the TP nurses a phone for calls about TP. One's personal phone is usually not worn or used outside of lunch, coffee breaks, and the occasional glance in the office on calm days.

These phones themselves can be seen as being symbolic and their use can reveal a shift between roles. It is easy to spot and determine a work phone from a personal phone. The phones used by nurses are older phones, of the so-called second generation, predating the omnipresent smart phones that are used by the nurses. The work phones are small, durable, and only allow for phone calls and text messaging. They can, so to speak, be seen as artefacts that act as symbols of efficacy, cost-efficiency, and austerity. The phones also reveal some of the boundaries associated with nursing work, serving as a reminder of what is, and what is not, acceptable behaviour during work hours. In stark contrast to the dull work phones, nurses' personal phones tend to be large, affluent, and often encased by colourful and playful casings that are seemingly chosen by its wielder with care and attention. The type of phone one holds tends to reveal, or at least suggest, a shift between roles from a professional persona to one's 'private' self. This shift is most evident during certain times of the day when almost all nurses can be observed sitting around the dining table, looking at their phones, writing messages on Facebook, showing video clips from YouTube, or discussing influencers they follow on Instagram.

Phone activity can be seen as an identity marker and as an artefact of social control. Since work phones are shared among the nurses, their symbolic qualities are different from that of personal phones. Shared phones can be seen as a subtle negation of individual identity claims, in favour of a symbolic manifestation and social reproduction of 'teamwork' and 'worktime'. As symbolic artefacts, work phones seem to produce, and re-produce, 'worktime'. Because phones are almost always present and answered when called, their presence suggests that there are no 'true' breaks. Moreover, as nurses are expected to answer the phone, they represent a form of social control. That is, one is expected to be available, ready, and willing to heed the call. Symbolically speaking, if a person's phone is relentlessly

screaming for attention, it is reasonable to treat this as a sign of the person's social importance. This importance can be understood as being two-fold: first, if the phone is ringing on a regular basis, it signals to others that the owner of the phone must be of some importance, and second, if the phone's wielder brings it along, and is keen on answering it, it signals their own belief in their importance – or their need to convey such an impression. Conversely, rejecting calls and refusing to answer can be interpreted as a sign of social power, that is, the power to say no.

What the phones do is not only dependent on what kind of phone it is, but on who is wielding it, and under what circumstances. I will provide two examples from work at the RCU to exemplify. During weekly and ad hoc workplace meetings, all staff members meet with the unit manager, Parker. During these meetings, Parker typically makes a point of placing the phone on silent – albeit it is usually placed face-up on the table. Such a move signals Parker's attentiveness and privileged focus towards those present in the room. At the same time, by placing the phone face-up signals that Parker is still in control by being able to see what happens on the phone and to react to it if called for. Parkers' importance, diligence, attention, and power as a manager is, thus, reproduced on a symbolic level. This is usually most evident in the frequently occurring situation when one of the nurse's phones go off – and loudly they go off! – and they run off to answer during the meeting. That is, the nurses must answer while the manager can choose to answer, to ignore, or reject the call.

On a symbolic level, the nurses' tendency to run off to answer calls mid-meeting can be understood as a subtle form of 'anti-managerialism'. That is, the patient caller is afforded a privileged position in terms of attention, while the manager is, in a sense, rejected. However, the nurses can, and sometimes do, reject calls. During times when the nurses meet with patients and receive a call at the same time, they can choose to refuse the call. In these cases, the phone can be seen as a part of the nurses' personal front. Essentially, in these situations, a hierarchy of service and attention is established and acted out. Hence, the nurse must navigate and choose whom to favour: the person that he or she is facing, or the caller. Either choice made by the nurse calls for him or her to justify the decision as to whose attention is given a privileged position.

Talk

Everyday talk amongst the nurses is often infused with a tone of sarcasm. The fierce hierarchal differences between nurses and doctors are, for example,

sometimes made apparent when a nurse sardonically refers to the doctors as "the gods". Moreover, it is not uncommon to hear nurses make exhilarating remarks about getting the 'opportunity' to work a double shift, or to work during the weekend. This manner of speech is made in a mocking manner, aiming to make fun of what is said to be a common management trope – that 'there are no problems, only opportunities'. In a similar manner, ahead of the annual salary review, a few nurses would excitedly talk about huge raises and about the huge mansions they would now be able to afford and purchase. The implication being that despite fierce complaints every year, their salary increases rarely amounted to much more than the rate of inflation. Decisions made by politicians were often talked about as being excellent and well-thought out. However, it was often explained to me that politicians were completely detached and unknowing about the everyday realities of healthcare work. Someone else once said, advocating on behalf of the whole body of healthcare professionals, that they are often subject to organisational changes that they neither understand nor consider as necessary.

A recurring topic of conversation among staff members is the penalty fines that the hospital has been issued on an almost yearly basis over the past few years. The hospital has been penalised for having in-patients staying in the corridors, due to what is often referred to as having 'a lack of beds'. On one of my rounds in the hospital, one of the nurses showed me a room full of folding beds and told me: 'there are beds, you see. It is not a matter of beds, but a lack of people'. It is worth noting that 'beds' are used metaphorically here to convey in simple terms what is a complex issue of staffing, organisation, and politics. Although it may seem evident that a 'lack of beds' should not be taken literally, it has often been expressed to me by members of the RCU that politicians and the public simply do not understand the complex reality of healthcare work.

A perceived lack of pay or salary increase is also a common topic of conversation among the nurses. However, it often appears to me that salary holds a particular symbolic importance. For example, despite its salience in conversations, almost all the nurses still maintained that they did not need a higher salary or more money. There appears to be a set of conflicting ideals among the nurses between, on the one hand, choosing this line of work for one's ideals rather than for money and, on the other hand, receiving a salary or financial incentives that at least symbolically should be able to convey to them that they are valued and appreciated members of staff.

'Pricking' (venipuncture) is another frequent topic of conversation among the nurses. Essentially, most patients at the RCU suffer from a combination of

illnesses. Therefore, they spend much time going between different care units where an array of tests are performed on them, most of which require blood samples and for them to be pricked. There are two implications of pricking that are often raised by the nurses in discussions of this kind. The first is an empathic concern for patients who are often old and frail and whose arms, the nurses sometimes say, are almost torn asunder by the remnants of a syringe after syringe, prick after prick. Their empathy sometimes goes so far that it breaks off from the immediate circumstance of the patient. During a nurse-patient meeting, I observed the nurse insisting that the patient must be exhausted, despite being told that this was not the case. Apart from a concern for their patients, pricking also represents what the nurses claim to be a lack of coordination between care units. This means that patient care and test-taking are not coordinated between different care units. The lack of coordination is manifested by a patient's arm bearing the scars of several pricks, which is compared to an idealised vision of a single prick through which multiple vials of blood, coordinated between each care unit, could be derived.

Summary

It is impossible to present a full account of any empirical setting. Anyone who has ever produced a fieldwork account or attempted to define a particular situation knows how different these accounts or definitions can be when they are compared to other inhabitants of the same setting. Not because the setting, or the situation, somehow changed, but because we enter and leave these contexts with a variety of different understandings, assumptions, ways of seeing, thinking, and expressing our experiences of these contexts. Quite clearly, the role, background, and interests we have as researchers shape what we see, think, and write, as do our choices of theories and methods. The people we meet, the situations and events we witness, and what we see, hear and feel change us, influencing our depiction of the field (Nyberg & Delaney, 2014). Any account of the field is thus bound to be filtered and mediated through the perspective of the account giver. These accounts also rely on a series of choices about what to include and what to omit (cf. Becker, 1998). In other words, despite my best efforts to allow the reader to enter into the same world as I once visited, the world I depict here represents just one out of several possible worlds.

CHAPTER *6*
THE GFR: A TELL-TALE NUMBER

Introduction

This chapter examines a medical number known as the Glomular Filtration Rate (GFR). I call it a 'tell-tale number' to highlight and synthesise three important aspects of the GFR. Two of these aspects relate back to the dictionary's definition of tell-tale – that I have paraphrased and modified to fit the thesis. Firstly, a tell-tale number provides an indication of the state of something. Secondly, tell-tale numbers report on the wrongdoings of others, or reveal their secrets. Thirdly, as a tell-tale number, the GFR number establishes a narrative, or trajectory, a set of actions, and plausible outcomes that can be grasped and projected through the number – about what is, what ought to be done, and what is to come.

The chapter draws on five kinds of interactions involving the GFR number – nurse-patient, computer-nurse, patient-number, administrator-number, and nurse-nurse. There is no need to complicate these interactions. They make out different situations in which nurses, patients, and administrators are subjected to, or make use of, the GFR number. They are situations where these people either use the GFR number in various interactions, such as when a nurse tries to convey something to a patient, or when a patient tries to explain something to a nurse. Alternatively, when a nurse or administrator interacts with the GFR number to categorise, sort, or prioritise between patients and actions.

Next, I describe some of the difficulties and controversies involved in the production of the GFR number. Thereafter, I show how, despite such difficulties, the GFR number is used as a clear-cut representation of kidney function in everyday clinical practice. I argue that the performativity of the GFR number is an accomplishment that relies on how it is represented and communicated in

everyday work. The GFR number is used as a powerful tool by clinicians in their attempts to inform patients about their illness. Furthermore, I illustrate how it is used by members of the RCU in various ways, from organising their work to making medical decisions. In so doing, I argue that the GFR number functions as a form of 'object control' (Rennstam, 2012). The number acts by interpellating staff members to come up with creative and knowledgeable solutions to the problems they encounter. I show how CKD nurses use the GFR number to persuade their patients about their health status and the actions they ought to take in their everyday lives. Lastly, I argue that the GFR number enables 'self-governing capabilities' (cf. Rose, 1999) among patients, through which their actions are infused with meaning and significance, further propelling and empowering them to intervene in their own daily lives.

Background

In simple terms, glomerular filtration is a process by which the glomeruli – tiny filters in the kidneys – filter waste from the blood that passes through them. GFR is a measurement of the rate at which this bodily process occurs. The GFR, insofar as this thesis is concerned, refers to the numbers that are produced through tests, estimates, and measurements aimed at capturing the process of glomerular filtration. The GFR number is produced using a ratio measurement scale, representing the test-subject's kidney function as a percentage (0–100%). The percentages, in turn, are categorised and placed into one out of five stages of CKD, ranging from mild to acute kidney failure. The GFR number is used by medical professionals to assess how well a person's kidneys are functioning, to detect the severity of renal disease, to calculate proper drug dosage in treatment, and to appraise the renal involvement in systemic diseases.

Direct measurement of the glomerular filtration rate process is impossible. This is because the filtration process that such tests aim to capture takes place in millions of glomeruli at the same time, changing the filtrate composition and volume that is passing through the kidneys (Soveri et al., 2014). In its place, what is called 'true GFR' is claimed to be the average GFR measured by urinary inulin clearance. Inulin is a carbohydrate that is not made by the body and does not break down or react with other substances, and therefore lends itself as an excellent marker for checking the kidney's capacity to filter it. To achieve a "true" GFR, inulin clearance should be measured over a twenty-four-hour period to account for the kidney's circadian rhythm. However, in clinical practice, this method is too

cumbersome. Therefore, other methods have been developed to estimate and measure GFR (Abdi & O'Donoghue, 2012; Boele-Schutte & Gansevoort, 2017).

The gold standard for measuring kidney function is considered to be measured GFR (mGFR) – a test that aims to capture the clearance of an exogenous filtration marker, such as iohexol or iothalamate, over a shorter period (Boele-Schutte & Gansevoort, 2017). Clearance is equivalent to the volume of plasma from which a substance must be totally removed to account for its rate of excretion in urine per unit of time (Schwartz & Furth, 2007). However, measuring clearance using exogenous markers is complex, expensive, and difficult to perform routinely in clinical practice. Furthermore, studies have reported a measurement error of five to twenty per cent during a single clearance procedure or between clearance procedures on different days (Stevens, Coresh, Greene, & Levey, 2006).

In clinical practice, estimated GFR (eGFR) is the most commonly used method for assessing GFR. It is calculated by estimating the clearance rate of an endogenous indicator, either Serum Creatinine or Cystatin C (Abdi & O'Donoghue, 2012). Creatinine is a by-product of muscle metabolism that is chiefly filtered by glomerular filtration. In essence, if this filtration is deficient, the levels of concentrated creatine in the blood increases, serving as an estimate for glomerular filtration. In clinical settings, eGRF is most often calculated by measuring the clearance rate of creatine through glomerular filtration. Like mGFR, the ideal scenario is to measure clearance over a 24-hour period, but this is often unfeasible in clinical practice.

To overcome the difficulties and limitations associated with estimating GFR, an array of equations with increasing mathematical complexity have been developed over time. These range from simple ratios to estimations involving exponentials or logarithms, which can be combined with conditional parameters and corrective factors for sex, ethnicity, or renal function (Porrini et al., 2019). Proponents of eGFR argue that the universal application of creatinine-based equations provides fairly reliable results across the world at a fraction of the cost required to produce the mGFR (Boele-Schutte & Gansevoort, 2017). However, opponents of eGFR maintain that it lacks precision and is too inaccurate and unreliable to be used for clinical practice or research (Bjornstad, Karger, & Maahs, 2018; Porrini et al., 2019). A more nuanced view is that both eGFR and mGFR should be used, but that the former should be used in combination with other ways of assessing and interpreting renal function and that the latter should be used if needed and when possible (cf. Levey, Coresh, Tighiouart, Greene, & Inker, 2019).

The CKD staging system contains five stages of CKD; it was first launched in 2002 by the Kidney Disease Outcomes Quality Initiative. Technically, there are six stages of CKD, as the third stage is divided into two sub-stages, 3a and 3b (cf. figure 3 below). This system has prompted a shift in the focus and conceptual framing of medical practitioners, moving from a aetiology-based system towards a schema based on disease severity defined by the GFR (Polkinghorne, 2011). Within the medical community, the CKD stages are generally deemed to be useful but controversial. The main issues of contention concern the (in)accuracy of eGFR, the potential for over-diagnosis of CKD in the elderly population, the appropriateness of cut-offs between the different stages, and a lack of consideration regarding CKD aetiology (Abdi & O'Donoghue, 2012). Such controversies notwithstanding, by placing people into categories of CKD, they can enter a universal and standardised treatment protocol.

The production of the GFR number is more complicated and disputed than what may be suggested by its appearance at first glance. However, this chapter is concerned with how the GFR number is used in everyday clinical work. Thus, I have paid attention to what the GFR number does, and what it allows people to do, or restricts them from doing – rather than on how it has been produced, or which production method is favoured in clinical practice. My focus in this chapter is on the role of the GFR number in everyday healthcare work. However, it is worth keeping in mind the contested nature of the GFR number when seeing how influential, significant, and convincing it is made to appear in everyday clinical work.

The GFR Number at Work

In the forthcoming discussion, I present four interpretative themes about what the GFR number does, including what it allows people to do. First, I show how the GFR number reveals a health status and in so doing renders an 'invisible' illness visible. Second, I show how the GFR number functions as a tool for identifying patients. Third, I show how it enables sorting and prioritising between patients. Fourth, I show how the GFR number enables nurses to manage their patients through the GFR number.

The GFR number reveals an otherwise unseen illness

CKD is part of a group of diseases often referred to as being "invisible". That is, the bodies of those that suffer from CKD do not reveal any visible signs or symptoms, at least not until the disease has reached a late and often acute stage of its progression. It is paramount for the disease to be detected and for patients with CKD to be identified promptly for them to receive the necessary support, guidance, and treatment.

CKD is an incurable but treatable condition. In an ideal scenario, a person's kidney failure never reaches the stage of complete deterioration, where symptoms are clearly visible and treatments such as dialysis or transplantation become life-preserving requirements. Many things can be done to treat, that is to halt, the rate at which the kidneys are failing, such as a tailored diet, weight loss, and exercise. However, effective treatment requires patients to recognise their condition. As one of my informants, Alex, a senior physician, put it:

Alex (doctor): It is a huge pedagogical problem to get people to understand that they are in fact ill, when they do not feel ill.

Indeed, it is not sufficient to merely reveal CKD, people – or patients – need to be identified and convinced – despite their own sensory experience – that they are severely ill and at risk. I will return to these aspects of CKD and the GFR number throughout this chapter. For now, I wish to highlight the ability of the GFR number to reveal an illness otherwise unseen. The GFR number does this by conjuring an image of a person's kidney function that transforms what is otherwise unseen and 'invisible' into a knowable, manageable, and clear-cut number.

The GFR number is depicted as a single measurement aimed at making visible a person's kidney function. It is presented as a ratio measurement scale ranging from one hundred – immaculate function – to zero – no function. This number is used to establish stages or categories of CKD (stages 1–5). By measuring a person's GFR on a regular basis, patients and medical staff can make comparisons between past and present GFR numbers. These GFR numbers allow them to make visible the progression rate of a person's renal failure.

It is well worth noting the text at the asterisk: "Your GFR number tells you how much kidney function you have (figure 2 below). As kidney disease gets worse, the GFR number goes down". Notice how the GFR number actively does something in this text; it tells the patient about his or her kidney function. The

GFR number is also made to follow the disease – 'as the kidney disease gets worse, the GFR number goes down'. That is, when the disease moves, so does the GFR number. Such a phrasing makes an authoritative claim that the GFR number does, in fact, accurately and to the letter, represent a person's kidney function. In other words, the way in which the GFR numbers is presented to patients by medical professionals suggests that it is detached from the controversies that permeate its production.

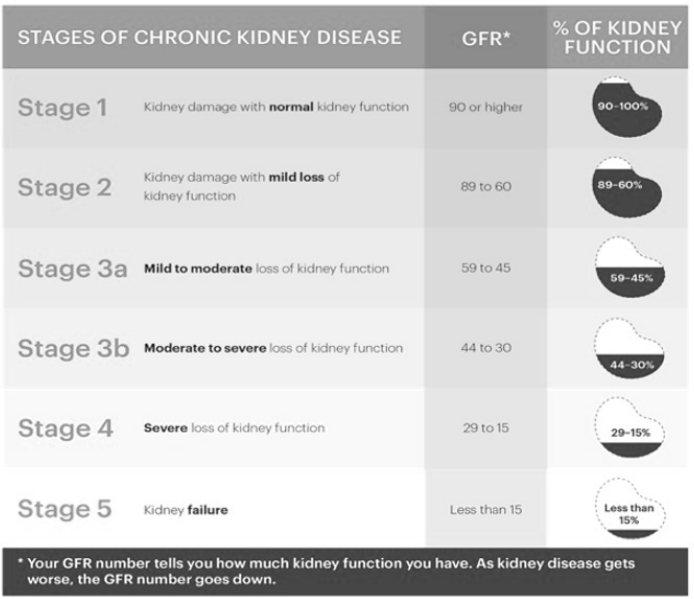

Figure 2. Stages of Chronic Kidney Disease (NKF, 2018)

The GFR number identifies patients

Few people with CKD actively seek treatment. Those who do usually do so at a late stage of their illness, when symptoms have become noticeable. At that point, usually around 10–15 per cent GFR, the person's medical state tends to be in dire straits. Therefore, clinicians actively strive to identify patients with CKD to intervene in the progressive worsening of the person's kidney function. The premise of the GFR number is explained by Alex (doctor):

Alex (doctor): While there are ways of knowing and predicting which patients may become victims of kidney disease, not all are known in advance. One way of ascertaining the risk

> of kidney failure is by looking at diabetes as an early indicator of kidney failure. These patients are found within primary care units. General atherosclerosis, high blood pressure, poor circulation can also cause kidney failure. However, around 15–20 per cent – roughly one out of five patients – arrive at the care unit like a bolt of lightning from a clear blue sky. These cases require immediate attention and to be enrolled in treatment.

The GFR serves as a tool for healthcare practitioners to identify individuals who, unknowingly, experience kidney failure. Because of the price tag attached to kidney disease – human suffering, labour, and financial costs – the ability to proactively identify patients and to intervene in their disease at an early stage are a vital aspects of renal care. Alex explains the process for identifying patients:

Alex (doctor): There are two criteria. The first is that the person's kidney function is impaired in some way. That is what we measure with the GFR. This can be estimated with the help of a simple blood test. The second is that the patient has a leakage of egg white in their urine. Using these fairly simple tests, we are nowadays able to identify, in advance, eight out of ten patients who will eventually become seriously ill from a kidney disease and may need dialysis or transplantation.

The first test refers to the eGFR which assesses kidney function, while the second test examines kidney damage using an endogenous marker, such as proteinuria or albuminuria. These are both proteins that, under normal circumstances will not pass through healthy kidneys. If the kidneys, however, are damaged, a certain amount of protein will be able to pass through into the urine. As Alex suggests, these tests are fairly simple and cost effective. Rather than having to rely on exogenous markers, such as testing for mGFR or performing a kidney biopsy, these tests can be deployed at a wide level to identify a large group of patients – eight out of ten, it is claimed.

It is of particular importance to reflect on the claim that the RCU – and renal care more broadly – can 'identify in advance eight out of ten patients who will eventually become seriously ill from a kidney disease'. The notion that patients can be identified in advance means that patients are "found" outside of the RCU's domain. Usually, they are identified by clinicians at primary care units or other specialised care units, such as diabetes or cardiology clinics. In other words, eight out of ten patients are actively sought out, identified, and funnelled into the RCU.

According to Alex, the remaining two out of ten patients 'arrive at the hospital like a bolt of lightning from a clear blue sky'. In practice, this often means that these patients arrive at the hospital's emergency care unit, showing signs of acute renal failure.

While it is certainly an advantage that a system has been put into place that facilitates finding patients and enrolling them into treatment, it may not be entirely unproblematic. As I indicated in the beginning of this chapter, there is a tendency when using the eGFR to over-diagnose certain patient groups, mainly elderly women (cf. Polkinghorne, 2011). Thus, there is a potential risk in actively identifying patients who may not necessarily need active treatment. Throughout my fieldwork at the RCU, several nurses expressed concerns about the inclusion of many elderly and often multi-ill patients in tough treatment regimes, such as dialysis. These nurses claim that certain patients may actually be better off without medical intervention because such interventions can be tough, time-consuming, and could have a negative impact on the patient's quality of life.

It can be argued that all patients who can be treated should be treated. A counter argument is that certain patient groups may actually be better off living in a state of blissful ignorance in terms of their undetected health condition, rather than being actively sought out, identified, and enrolled into treatment. Despite knowing about their illness and its progression, some patients still choose to live as they did prior to knowing about their disease. What is more, dialysis is an expensive treatment, with each patient's treatment costing around 700,000 SEK per year. Whether this money could be better spent elsewhere is a point of contention. Finding and identifying patients is a highly intricate ethical matter, one that deserves careful attention, which I cannot afford in this thesis. I merely with to point out that what may seem self-evidently good can have a burdensome flip side. Importantly, this ethical dilemma is propelled by the GFR number, which enables hospitals to identify patients and to categorise them as severely ill and in need of medical intervention. At that point, they are deprived of, or rescued from, a state of ignorance about their medical condition and must choose between harsh treatments, ignoring their diagnosis, or perhaps even actively refusing treatment.

The GFR number sorts patients

When patients – or more often, their referral forms – arrive at the RCU, staff members make use of their GFR number in various ways to sort them and to

prioritise between them. When prioritising whom to call for an appointment, patients with a high GFR value and a low progression rate are seldom summoned with haste or frequency. These patients can be referred to as low-risk-patients. Conversely, patients with a high GFR value and a rapid progression rate are summoned more frequently to the care unit and often with a sense of urgency. These individuals can be referred to as high-risk-patients. While it is generally true that high-risk patients are summoned more frequently to the RCU. The frequency also depends on the individual preferences and discretion of the patient's physician. Some physicians like to meet even their low-risk patients on a regular basis, while others meet their patients with several years in between visits. While the GFR number informs their decision-making, physicians have much discretion when it comes to deciding when to meet with their patients.

The nurses, on the other hand, seem to be slightly more bound by the GFR number. Although the nurses have some discretion when it comes to summoning patients, they utilise the GFR number by means of list-making and sorting when determining when and whom to summon for appointments. The GFR number is especially valuable and serviceable for the CKD nurses, who use it to sort between patients when they decide if, and in what way, a patient is to be informed about their illness and treatment options. Therefore, I have placed a particular focus on the CKD nurses because their work places a greater emphasis on the use of the GFR number. Although PD and TP nurses may also make use of the GFR number, they are less reliant on it because most of their actions are, in a sense, predetermined due to the relatively acute state of their patients at that point.

The GFR number elicits certain default actions in terms of sorting. When a patient first "arrives" at the RCU, it is most often in the form of a referral form. Generally, a physician at another care unit or hospital has identified that a patient's GFR number, or another medical indicator, is showing signs of renal failure or kidney damage, and they have therefore referred the patient to the RCU. At the RCU, the referral form is first picked up and handled by the medical secretaries. One of my informants, Kim, explained the process of sorting and how it relates to the GFR as follows:

Kim (medical secretary): When we look at referrals and lists of patients already enrolled in the care unit, we use the GFR to sort out who does what. Patients with a GFR above 45 are called "notare"; these are CKD patients and are handled by the CKD nurses. We [the medical secretaries] only book and plan meetings for patients with a GFR below 45.

The word "notare" is used within the RCU for patients who have been diagnosed with CKD but have a GFR value that is high enough not to warrant any, or hardly any, treatment or intervention by a clinician. It is possible to think of these patients as being noted as having CKD and thus, with having started their career as a CKD patient. The patient's career as a CKD patient is determined by the GFR number and its decline. In principle, the patient stays a CKD patient until around 20 or 15 GFR, at which point he or she enters dialysis or is prepared to do so by the nurses. At this point, the patient is cared for by the PD or HD nurses, rather than by the CKD nurses. The patients' GFR values are consistently monitored and followed up from time to time by the nurses. The GFR value of 45 is not an arbitrary number; it is the point when a patient goes from the category of 3a to 3b in the CKD stages. Such a transition means that the patient goes from being categorised as a person with mild to moderate loss of kidney function (stage 3a) to a person with moderate to severe loss of kidney function (stage 3b). In other words, "notare" are those patients that have been categorised, based on their GFR values, as belonging to stages 1–3a of the CKD stages.

The GFR number enables managing by numbers

As I have mentioned earlier in this book, the work done at the RCU bears many similarities to what Goffman (1961) calls 'people work'. This entails individuals working on people as a type of product. As products, people are thought of as objects to be worked on by the gentle – or stern – hand of the professional. Teachers, prison staff, psychiatrists, doctors, and nurses are all examples of professionals doing people work. Through this kind of work, the 'object' is altered, and a changed person is produced. Ideally, the uninformed is enlightened, the criminal is turned into a law-abiding citizen, the insane is made sane, and the sick is made healthy as the body is repaired and the illness vanquished. At the RCU, however, there is no way of curing the illness, nor must the bodies of patients be physically present as the nurses perform their work. Instead, the GFR number provides them with an object through which their patients can be worked upon and managed at a distance, often through computer and phone work.

The work of CKD nurses is well summarised by one of my informants, Casey (nurse).

Casey (nurse): Our job is to coordinate and inform. Mainly, to give the patients information about renal failure and what the kidneys do, so that they can do something about their

> renal failure themselves – self-treatment. We try to hamper the renal failure – it is rarely stoppable. I keep my patients informed about what is going on and what is happening. I also do health check-ups. We try to map out what phase we are in, in terms of renal failure, so that we know what we need to do and how quickly we need to do it.

Casey describes how the CKD nurses monitor their patients' GFR values to gauge how their disease is progressing and to slow down the decline of their kidney function. Casey mentions that 'we' try to hamper the renal failure. In the context of the excerpt, "we" refers to the CKD nurses, yet in many ways, the extent to which the patients' CKD can be hampered is up to the patient's own actions. The actions of the CKD nurse are to inform, as Casey points out, but also to convince and persuade the patient about the severity of his or her illness, the urgency to act, and to encourage them to engage in self-treatment. However, the term "we" also refers to, and circles around, the patient. The use of "we" indicates a patient-centred care. In this approach, actions revolve around the particular needs and dispositions of each individual patient, where the patient, together with their CKD nurse, forms a team set up to hamper the progression of the patient's disease. This is further implied when Casey says that they try to 'map out what stage we are in'.

By stating that they try to map out what phase they are in, Casey is referring to the GFR number and the CKD stages. This is an interesting point made by Casey, as it implies that Casey is suggesting that CKD operates in a universal way. That is, there are clear phases of CKD and by identifying what stage the patient is in – which is made possible by the GFR number – the disease and its progression become understandable and, by extension, manageable. As Casey points out, 'so that we know what we need to do and how quickly we need to do it'. This last sentence suggests that by establishing and monitoring the GFR number, the patient's disease becomes known, but more importantly, the GFR number indicates what they need to do and when they need to it.

Because of the importance the GFR number has for everyday work at the RCU, much of the CKD nurses' day-to-day work involves looking at and interpreting the GFR values along with other associated medical numbers. Such numbers include values for natrium, glucose, calcium, potassium, and blood pressure. The nurses look for abnormalities in these values and for how they have changed over time. The nurses interpret the numbers by reviewing their patient's medical journals and list of medications. They then attempt to establish what may have

caused a certain number to spike and try to get the patient to act in a way that restores balance to this number. Associated medical values affect the GFR number, or rather its progression rate, which, in turn, informs the actions that need to be taken by the medical staff.

In essence, the main tool at the CKD nurses' disposal to manage their patients is the GFR number. Managing patients via the GFR number serves two key functions. First, nurses utilise the GFR number to sort patients. By using the CKD-stages, nurses can categorise their patients and decide, based on the stage of CKD the patient is currently in, what kind of information the patient should receive. Second, the GFR number allows the nurses to manage their patients by lending itself as a representation of the patients' kidney function. Such representations make it possible for the nurses to intervene in the renal function by referring to the patients' GFR number and by suggesting changes in the patients' everyday life. Because it is not possible for the nurses to gain direct access to either the person's renal function, or to his or her everyday life habits, the GFR number becomes a surrogate for both. The GFR number serves as a tool by which the nurses can manage their patient's renal function by visualising it and interpreting their patients' everyday actions in relation to their GFR values, and suggest appropriate interventions in their daily lives.

The GFR number acts like a form of 'object-control' that works by engaging organisational members (cf. Rennstam, 2012). That is, the GFR number performs by inviting organisational members to interact with it and to develop knowledge about their patients and their treatment. For example, amid other numbers, the GFR number informs the CKD nurses about their patients, their histories, treatments, and past appointments. When nurses are looking at their monitors and at their patients' GFR numbers, they are attending to their patients in their absence. The GFR number performs by eliciting knowledge about a particular patient to the nurses, such as when the number has stayed the same over time or changed in an unexpected way. It does so in a way that seems like it is 'talking' to the nurses. That is, the GFR number engenders a set of actions or questions that the nurses must attend to. This is especially the case when the GFR number is compared to a patient's historical GFR values, ongoing treatment, or their personal accounts about their daily lives. For example, a steady number may probe the nurse to explore what it is that the patient is doing to maintain his or her GFR number and encourage more of the same activities. Conversely, a sharp decline can probe the nurses to investigate the cause of this decline. In this sense, the GFR number can be understood as an active agent in the decision-making process.

Performances with the GFR Number

In this part of the chapter, I present four kinds of performances put on by actors using the GFR number. First, I show how the GFR number can be mobilised as a means of persuasion. Second, I illustrate how the GFR number establishes a structure within which agency and responsibility can be assigned or rejected. Third, I showcase how the GFR number provides patients with an 'self-governing capability' (Rose, 1999). Fourth, I show how the GFR number acts as a *master number*, which I define as a device for meaning-making for other medical numbers and everyday actions.

The GFR number is used to enable and disables persuasion attempts

The GFR number has a persuasive force that enables and disables persuasion attempts by either the nurses or their patients. In renal care, attempts to persuade the patient about his or her illness are of great importance. This is because CKD is a disease that is "invisible" and for which its treatment depends on the patient's own intervention in his or her daily life. The persuasion attempts made by the nurses when using the GFR number likely benefit from the authority that is bestowed upon them as medical professionals. Yet, on the other hand, the patient can make claim to a unique knowledge of his or her own body and (lack of) sensory experience of the illness. Nonetheless, by virtue of being a number, the GFR number is often more trusted than qualitative assessments in determining renal function.

The GFR number is seductive. Its ability to act as a valid representation of the patient's kidney function is crucial for the patient's career as a CKD patient. Not only is this single number able to reveal – or make up – a patient's health status, progression rate, and a set of possible actions. By being tied to the CKD stages, the GFR number effectively positions a person into one out of the possible five stages of CKD. In a sense, a person does not become a CKD patient until he or she is tagged with a GFR number that places him or her in a particular stage of CKD. The GFR number is also fairly predictable and easy to grasp – a high and steady number is good, a low or quickly decreasing number is bad. For example, simply stating that a person has 15 GFR casts them into a category of acute renal failure, in need of dialysis treatment. If this number is accompanied by a set of previous GFR numbers, say 21, 19, 17, they can convey a trajectory of decline – the opposite, a rare course of improvement. The GFR number is essential for the

patient's own understanding of their illness, and for the organising of care and treatment within the RCU.

Although the GFR number lends itself well to performances aimed at persuading others, there are no guarantees that these performances will be successful. The following two excerpts, both involving Casey, were observed two weeks apart. In the first excerpt, Casey tells me about patients that crash. Unsuccessful attempts to persuade patients that they are, in fact, 'very ill, despite feeling healthy' can be understood as resulting in patients 'crashing'. Patients can also crash because of their desire to maintain a lifestyle that they value, or by their inability or unwillingness to abandon certain everyday habits that they have grown accustomed to.

Casey (nurse): Many patients lie. They do not want to start dialysis. They end up crashing. This is not optimal; the treatments we have here are labour intensive and hit patients hard. It is better to start treatments early. For older patients, they can ignore it and then they die. For younger patients, they ignore it, crash and then they need emergency care. There are many secondary diseases that hit against other bodily systems, resulting in the entire bodily system crashing.

Why do people crash? As Casey points out, dialysis is a tough treatment. Two forms of dialysis exist: one is labour intensive (peritoneal dialysis) and the other takes a heavy toll on the body (haemodialysis). For patients, undergoing dialysis marks a stage in their career as a CKD patient when their disease becomes real. That is, it is the point when talks, diets, and exercise transpose to the realities of catheters, machines, and bags upon bags of dialysis liquids to be pumped into the body. What Casey terms 'lying' can possibly also be understood as a form of denial from the patient's point of view. In fact, many clinicians at the RCU told me that their patients often go through all the so-called 'five stages of grief' – these stages are known as denial, anger, bargaining, depression, and acceptance. Now, consider the following observation and excerpt involving Renaldo, a patient who is facing the risk of crashing:

Renaldo, a seemingly healthy-looking man in his early to mid-fifties, arrives at the door to Casey's office. Renaldo is one of Casey's patients, who, Casey tells him, has 8 GFR – a medical state that is more or less considered as acute renal failure. Renaldo, however, tells Casey that he feels fine and is about to travel to Kosovo. Casey advises him not to go. "You can go", Casey says to Renaldo, "but you have very small margins and large risks. It is your decision, but you are in a very poor state physically". Renaldo replies that he feels fine.

Clearly, Renaldo does not seem persuaded by the low GFR number that is mobilised by Casey to get Renaldo to reconsider his trip. It would be easy to dismiss this story as a one-off, or a negative case of a failed performance. Indeed, in this interaction, it is possible that the GFR number fails to reveal and convince Renaldo of his poor health state. However, such a dismissal suggests a narrow notion of what the GFR number is doing in situations like these. It seems equally likely that Renaldo is aware that he is in fact very ill but chooses to go on with his regular day-to-day life for as long as he 'feels fine' and can do so – that is, before he crashes.

I argue, however, that in a situation like the one between Renaldo and Casey, what the GFR number is doing should not be understood in relation to the extent to which Renaldo is persuaded to change or modify his life plans. Rather, in a situation like this, I argue that the performativity of the GFR number should be interpreted as an illocutionary act that enables or disables each actor's attempt to persuade the other. That is, the GFR number enables Casey to make the claim that Renaldo is 'in a very poor state physically', despite Renaldo's own claim that he 'feels fine'. Without the GFR number, Casey would not be able, or at least less equipped, to position Renaldo as a severely ill patient. The GFR number also disables Renaldo's claim that he 'feels fine'. It is not that Renaldo is unable to make the claim per se, but the claim is negated by the GFR number which, through Casey's utterance, declares that Renaldo is, as a matter of fact, 'in a very poor state physically'.

The GFR number is used to establish a structure from which agency can be assigned or rejected

The following excerpt shows how the GFR number is mobilised in another patient-nurse interaction. This time, the GFR number is used to establish a structure from which the agency can be assigned or rejected. As this happens, the social identities of a healthcare professional and a member of a patient collective are subtly produced, as well as ideals or discourses of evidence-based medicine and patient-centred care. The excerpt revolves around Susanne, a CKD-patient, and nurse Robin. Susanne is in her mid-seventies, clear-headed, and alert, but appears frail.

Susanne (patient): I was diagnosed with CKD about fifteen years ago. At that time, I received treatment and got a dramatic improvement in my kidney function.

Robin turns to the computer screen to check Susanne's latest test results…

Robin (nurse): Good results; your values have improved. We are trying to push back dialysis.

When the word dialysis is mentioned, Susanne seems anxious and retreats into her chair…

Robin (nurse): Sometimes we talk about percentages [the GFR number]; today you have around 12–13 per cent of your kidney function. We are tracking it continuously. There is no cure, nor can one become cured. But we are tracking it [the GFR] all the time. Dialysis is the treatment. There are other kinds of treatments as well, but below 15 per cent, we talk about dialysis.

The progression rate is shown by Robin's statement that they are tracking it 'all the time', thus implying that they – the staff at the RCU – can monitor their patient's kidney function in 'real-time'. However, to monitor a person's GFR requires test-taking and analysis, so it is unfeasible to expect that the GFR can be tracked 'all the time', as if the GFR number was a moving object that the nurses have uninterrupted access to. As mentioned at the beginning of this chapter, such test-taking is generally impractical and unfeasible. Nevertheless, most patients do submit test samples on a relatively regular basis – what is regular depends on their doctor's assessment of need, the state of their kidney function, previous progression rate, medication, and various other indicators that may make it worthwhile to track the GFR number more or less frequently. These test results are then pieced together to form a cohesive account of the person's kidney function.

Words are important. The use of, and transposing between, pronouns such as "I", "you", "we", and "one", may seem trivial and merely representative of a more informal and lay manner of speaking. However, healthcare staff at the RCU – and, I believe, healthcare professionals in general – tend to be highly attentive to their language use during patient interactions and in their notetaking. For example, I once observed a nurse spend almost thirty minutes editing a single sentence to make sure that it conveyed a desired meaning. When the nurses talk in their offices, during lunch, or coffee breaks, it is not uncommon for them to discuss certain words or phrases to use or avoid and their implications. In their interactions with patients, the invocation of these words suggests a rhetorical technique used by the nurses. Such a rhetoric is used – possibly unconsciously – to convince and persuade patients about the veracity of their illness as depicted by the GFR number. But it is also about assigning agency and thereby responsibility.

When Robin discusses Susanne's test values, these are clearly presented as being hers, as Robin presents them as 'your results' and 'you have'. This suggests that the connection between the GFR number and the Susanne's kidney function is reified in a way that enables the number to be presented as a clear and undisturbed representation of Susanne's kidney function. When it comes to the disease, Robin talks about it in terms of 'one'. In this way, the statement is subtly transformed from a statement about Susanne's individual diagnosis to a general truth claim about a patient collective and a universal illness. Rather than relying on personal or professional judgement, Robin utilises the word "we" in a way that acts as a manoeuvre to sidestep being perceived as exercising personal judgement. By referring to a vague professional body of healthcare professionals, Robin establishes a subtle claim to authority.

Robin is trying to persuade Susanne that her kidney function is progressively deteriorating, and that she is experiencing acute kidney failure. Susanne, however, starts off the dialogue by stating that she has previously experienced significant improvement in her kidney function. Such stories challenge the narrative that CKD is a known disease with universally applicable stages into which a patient easily fits. For the nurses to convince their patients about making changes and keeping up with these changes in their everyday lives, it is important to establish a sense of urgency. The narrative of a steady, progressive, and largely irreversible decline is an important rhetorical tool for conveying this sense of urgency. Robin is attempting to persuade Susanne about the severity of Susanne's illness and the urgent need to maintain everyday discipline to hamper the kidney's deterioration – this is what is implied by Robin's statement 'we are trying to push back dialysis'. Susanne's statement not only suggests that a 'dramatic improvement' is possible, but it also implies a lack of agency on Susanne's part – she received, and she got. Thus, Susanne assigns responsibility to Robin and the other clinicians at the RCU; they should provide her with treatment.

The GFR number enables self-governing capabilities

Many things can be done to treat CKD, that is, to halt the rate at which the kidneys are failing. Such things – a change in diet, increased exercise, weight loss, and taking control of one's blood pressure – chiefly rely on efforts made by the individual suffering from CKD. In other words, effective treatment calls for an active intervention by the patient in his or her daily life. However, for such interventions to be effective, the person must perceive and understand his or her disease – or be persuaded that he or she is in an acute stage of the illness and needs

to modify his or her everyday habits. Through the GFR number, patients can visualise and act upon their kidneys, or at least upon their kidney function. Since the deterioration of kidney function can be halted by 'simple' means, such as diet and exercise, the progression rate can be connected to actions taken by the individual – a slow progression suggests 'good behaviour', whereas a fast progression suggests 'bad behaviour'.

The GFR number, I argue, enables something akin to what Rose (1999) calls 'self-governing capabilities'. On the one hand, a nurse can deploy the GFR number to persuade a patient to alter his or her behaviour. On the other hand, an effect of the GFR number is that it can transform a patient's mindset in unexpected and unintended ways. Below are excerpts in which a CKD patient, Hugo, can act upon his own body and evaluate his actions through the GFR number. The first excerpt is from an observation I made during a meeting between Robin and Hugo. During the meeting, Robin informs Hugo about his upcoming treatment options.

Before the meeting, Robin tells me that the patient, Hugo, has a GFR of 12, a value that has remained stable over the past year. Hugo is in his mid-fifties, overweight, and suffers from type-two diabetes. When Hugo finds out that there will not be any test taking during his appointment, he appears disappointed and says that he has an excel-document where he enters all of his test results. Moments later, when Robin shows him his latest test results, Hugo brightens up and tells Robin that he has made significant changes to his diet.

Robin (nurse):	Transplantation is the best treatment, but one must take care of the kidney afterwards.
Hugo (patient):	If you don't take care of the kidney, then you don't deserve it… A while back, I met a young guy, a nurse. He was urging me to start cycling – he was a support person for people with kidney disease. He had the illness himself, but he had received a transplant, started cycling, and had rearranged his entire life.
Robin (nurse):	They are really tough at [the hospital that performs kidney transplants]. The better you are physically, the more success you will have.

In the opening statement, Robin assigns responsibility from the healthcare professionals to the patient groups that are recipients of a kidney transplant. In so doing, within the interaction, Robin is subtly establishing a social world where personal responsibility is paramount. By using the word 'one' instead of 'you', the statement is deployed as a general claim rather than a direct plea to Hugo. This is a skilful manoeuvre, considering that Hugo suffers from type-two diabetes and

being overweight, which are often considered to be caused by an "imperfect" lifestyle and habits that are in stark contrast to those behaviours that are advocated by the staff members at the RCU – a healthy diet, daily exercise, and weight loss.

Hugo enters the social world established by Robin and goes one step further by attaching a moral imperative to kidney transplantation: 'if you don't take care of the kidney, then you don't deserve it'. It is worth remembering that a kidney transplant is a life-saving treatment. Hugo puts on a performance aimed at persuading Robin that he feels very strongly about taking care of his kidneys. His performance is corroborated by his improved GFR value and his claim of having made significant changes to his diet. By invoking the story about the support-person, Hugo positions himself as part of a conscientious patient collective, while simultaneously evading personal responsibility for his own health. Hugo's attempt to manoeuvre and deflect from personal responsibility is seemingly picked up by Robin. In the subsequent exchange, Robin assigns responsibility to Hugo by stating that the better you are, the more success you will have, which is prefaced by Robin claiming that the hospital is 'really tough'. Taken together, in these few lines of the excerpt, a social world is established where patients are held individually responsible for their own health. In this world, a potentially life-saving treatment is something the patient must deserve by accomplishing, or being seen as accomplishing, what is considered as positive changes in their everyday life. It is from this footing that Hugo now seems to speak:

Hugo points at a book that sits upright at the desk next to him, called 'your life, your choice'…

Hugo (patient): This is a journey that started when I got that book. I understand that I cannot receive a transplant now. I first have to make the journey… Perhaps, if I would change my diet and start to exercise, I would be able to stop taking insulin. [Before being referred to the RCU by his diabetes clinic] I had insane values for my kidneys. But I behaved like usual; that is, I did not behave. After all, I felt fine. It is not their fault [the staff at the diabetes clinic]; it is about money; everything is about money. But I realise that this is my fault; I have worked too much, slept too little. I have made myself unemployed…

Hugo refers to his illness and its treatment as 'a journey'. The semantic meaning of the word journey is to travel from one place to another, yet the references for both 'travel' and 'place' are ambiguous here. One interpretation is that of going from a state of unawareness and behaving 'badly', while feeling well, to reconciling

and learning to cope with having a chronic and progressive illness, thus starting to behave 'better'. For Hugo, the journey seems to mean an active intervention in his own life and to change its course – by changing his diet and starting to exercise. The GFR number can be understood as a way through which Hugo's experiences and actions are crystallised. They are converted into numbers that he can track and trace, and they are made meaningful inasmuch as they postpone dialysis treatment and empower further lifestyle changes. Hence, by means of the GFR number, Hugo moves from a state of – perhaps blissful – ignorance, to a state of knowing. At the end of the journey, Hugo's mindset has been 'transformed' into an agent who manages himself as an object made manifest by the GFR and actionable through a set of expert systems. As the conversation between Hugo and Robin ensues, the change in mindset becomes more evident.

Robin (nurse): How do you feel now?

Hugo (patient): Fine… okay…

There are a few seconds of silence, after which Hugo takes a deep breath, sighs and starts to speak…

Hugo (patient): If I don't drink milk – now I only drink oat milk. If I eat less meat – I have decreased the amount to 60 grams per day… No, I am not there yet. But I consider what I should eat, when, and how much – we have done the plate model, my wife and I – she does it. I am a competitive person, so tests and things like that will definitely go into my Excel.

Hugo now seems to have entered the third stage of grief – bargaining. Seen as a form of bargaining, he is not negotiating with Robin, but with himself about the concessions he is ready to make in his daily life in exchange for a better GFR number and postponed dialysis treatment. Hugo says that he is a 'competitive person' and qualifies the statement by adding that he will enter test scores and measurements into his excel document. By claiming to be 'a competitive person', Hugo positions himself as a man of action and as an active person, rather than a passive one, and as someone who will ultimately overcome his illness and prevail by 'making the journey'. Hugo's statements suggest that he has entered the social world initially conjured up by Robin. Out of its fabric, he has fashioned a social realm forged by determination and rivalry – a world in which 'the winner takes it all' – and where healthcare is a contest settled through personal effort and capability.

It may seem like the GFR number does not play an immediate or important role in the exchange between Robin and Hugo. However, according to the GFR number, Hugo has 12 per cent kidney function, which puts him in the most acute stage of CKD, and it is because of his GFR value that he and Robin are having a meeting about his treatment options. These options will either need to be initiated or postponed depending on the actions taken by Hugo and how these actions, in turn, are able to affect his GFR value. Moreover, without the GFR number, other related numbers become less meaningful. For example, Hugo's decreased meat intake, down to 60 grams per day, is meaningful – in terms of 'competitiveness' – only inasmuch as Hugo can interpret a decreased intake of meat, or a conversion to oat milk, as positively affecting his GFR, and the inferences he can make on his health based on changes to his GFR number. In other words, the GFR acts as a master number through which other numbers and everyday actions can be interpreted, understood, and acted upon.

The GFR acts as a master number

To better understand the relationship between the GFR number and other numbers, I have conceptualised the GFR as a master number. Let us look more closely at how the GFR number acts as a master number. That is, how it acts as a meaning-making device by which other numbers, and the everyday actions they tie into, can be infused with meaning. As a master number, it produces effects – interpretations and actions – that may go well beyond conventional meanings tied to the GFR number, or any intentions aimed at persuading or influencing. Consider the following brief excerpt from an informational meeting. This time, the meeting features Casey (nurse), who is meeting with Sigismund (patient) and Alice (Sigismund's spouse). In this meeting, Sigismund has improved his GFR value in a substantial way.

Casey (nurse): Good news, improved kidney function! It is now over 30 [the exact figure was 32 GFR, and it had previously been as low as 24]. Have you done anything out of the ordinary? What are you doing that is so good?

Sigismund straightens his back and brings his torso to a fore; his face reveals a smile – he seems happy and proud.

Sigismund (patient): I have started swimming, a thousand metres each week. I am going for walks, and I have changed my diet. We [Alice is sitting next to him] have been tracking the changes, we have entered them in a journal. Since I

spoke with the dietician, I have lost six kilos. I do what I can.

From the outset, because of the increase in the GFR number, the meeting is framed in a positive way. The GFR number, or more precisely, the reversal of its progression rate, suggests to Casey that Sigismund has made substantial alterations to his everyday life – something out of the ordinary. Sigismund's reaction to hearing about his improved GFR number is also quite significant. While patients may expect that their efforts to alter their everyday lives will have an effect, this is not always the case. Despite tracking and entering the changes Sigismund has made into a journal, it is not until the GFR number is revealed that potential effects become discernible, and in terms of his CKD, meaningful. In essence, it is in moments like these that everyday actions, such as a swimming, walks, and dietary changes, are infused with meaning and significance. The positive reinforcement that Sigismund receives from Casey, because of the improved GFR value, further reflects how the GFR number enables self-governing capacities among CKD patients, capacities that are sanctioned by the performances put on by the nurses. The excerpt, along with the subsequent excerpts, shows how the GFR number acts as a master number.

After explaining the different treatment options available to Sigismund, Casey moves closer to the couple and leans in.

Casey (nurse): You might see a worsening. You have made many things right, which is very good. Keep up the good work! It is important to track and regulate your blood values. Your blood pressure has also been a bit high, 137/68, but that is still very good. If one's blood pressure is in check, then the kidneys are not burdened by it. It is also important that you regulate and balance your salt, potassium, and phosphate levels.

Sigismund looks at Alice, then back at Casey…

Sigismund (patient): I have decreased the amount of milk that I drink.

Casey (nurse): We see all of this in the test results.

It is through the use of the numbers that the effects of patients' actions become discernible and "real". The statement made by Casey that they 'see all of this in the test results' reinforces the notion that every action taken by Sigismund in his everyday life has a numerically visible effect, seen in the GFR number and other related medical numbers that are available to the nurses. The GFR number acts as a sense-making device for other related numbers whose relationship to the renal

function may be important but difficult to assess without the GFR number. Statements like the one made by Casey assist in reifying the effects of actions and behaviours that may otherwise be seen as abstract or vague in terms of how they affect a patient's health status. Because CKD is largely unnoticed by patients with this diagnosis, numbers provide a crucial way for them to comprehend their disease.

Sigismund (patient): How much better can it [the GFR] get?

Casey goes quiet, leans back in the chair, looks up at the ceiling, then looks back at Sigismund.

Casey (nurse): Well, it is not really possible to improve it when we are dealing with a chronic disease. Anyway, this is a question you should speak to your doctor about. However, it is sometimes possible to see an increase of 5–10 per cent. Above twenty per cent, there is no perceived health detriment; you do not experience any difference in health [what Casey is suggesting is that there are no noticeable symptoms above 20 GFR].

Sigismund (patient): Yes, I do not feel any difference.

Casey (nurse): You can live a perfectly normal everyday life.

Alice (spouse): How low [GFR] until dialysis is needed?

Casey (nurse): Ten per cent, until it becomes topical.

Alice (spouse): You [Sigismund] have been doing so well…

Sigismund (patient): What more can one do?

Casey (nurse): There are many things that one can do to improve, or at least maintain, one's health. Exercise, weight, and diet – losing weight is important.

Sigismund (patient): I can do all of that.

In this last part of the excerpt, we see the importance of managing the GFR and how the GFR in effect enables self-governing capabilities. Sigismund does not have any visible symptoms of CKD – which is in line with the GFR being above 30. Because he is unable to perceive any difference in health, he is also unable to assess the extent to which his actions are affecting his health state, or more specifically, his renal function. Therefore, the GFR becomes a surrogate for what he is unable to determine through his own senses. Sigismund's CKD thus becomes manageable through the GFR, which performs by reflecting both his renal function and the consequences of his everyday actions.

Summary

Tell-tale numbers hint at many of the performative acts and effects of the GFR number. That is, how the GFR number establishes a clear image of kidney function, a narrative, or trajectory of work tasks and organising of care, as well as stories about what the patient can expect to happen. In doing so, two kinds of 'bets' are placed: either the patient will – as Hugo said – 'make the journey' and successfully intervene in his life, or he is, as Casey claimed, bound to crash. The GFR can act as a strong source of empowerment for patients who are struggling to cope with a progressive disease that is largely invisible to them. At the same time, the normative underpinnings associated with self-treatment may place a heavy burden on patients. Those patients who are unable to make the changes needed in their daily lives to hamper or reverse their progression rate may become increasingly discouraged to do so. What is worse, they may feel unworthy of potentially life-saving treatment that they must receive but feel incapable of earning. Arguably, the kinds of social worlds that emerge from the GFR are the unintended consequences of the number's use.

CHAPTER 7
THE PD GOAL: TARGETS, PERFORMERS, AND PERFORMANCES

Introduction

This chapter examines the role of an important and frequently talked about performance number within the RCU, the Peritoneal Dialysis (PD) goal. The PD goal is relational, that is, it is meaningful as a performance target only inasmuch as it corresponds to the ratio between Haemodialysis (HD) and PD. When presented, the PD goal number appears as either a percentage or as a dichotomous ratio scale – like 60/40 or 80/20. By virtue of being the sum of the ratios between PD and HD treatments, it is very straightforward to calculate and easy for the nurses to monitor. The PD/HD number represents patients undergoing dialysis treatment and excludes those that are not in dialysis. The PD goal can be seen as an ideal-type performance number.

In principle, the most central work task of the medical staff and patients in renal care are to halt the patients' progression rate and maintain his or her GFR for as long as possible. In doing so, dialysis treatment can be postponed or, in the best of worlds, evaded. However, once a patient's GFR falls below a certain threshold of the GFR, usually around 15 per cent, the patient needs to be prepared for, or enrolled in, dialysis.

The PD goal is arguably one of the most important key performance indicators at the RCU. To the extent the goal is achieved, it has a significant impact on financial costs, labour time, and the everyday lives of patients. In very simple terms, PD is a treatment largely perform by patients themselves in their own home, whereas HD is performed at the hospital with the assistance of medical

staff and dialysis machines. This means that PD, compared to HD, is a much more cost-effective treatment. Despite the medical and personal complexities involved in deciding on a dialysis treatment, from the standpoint of an organisational performance, a good performance means a high PD ratio and number.

The qualities of being a performance target raise at least two questions: what is the *target* and what is the *performance*? In its most overt and accessible form, the target of this measurement is to increase the number of patients on PD in relation to the number of patients on HD. Thus, the goal is not to increase the number of PD treatments per se, but to decrease the number of patients on HD. This chapter focuses on situations where nurses inform their patients about their upcoming treatment options – HD or PD. In essence, I will show how the PD goal subtly influences the performances of the nurses at the RCU in their interactions with patients, who, in turn, become the target of the PD goal. The nurses perform by attempting to persuade patients that PD is the preferred form of treatment. In effect, the patient becomes the target of these performances, and their choice (PD or HD), as well as the ability of the nurses to persuade them, are ultimately what is evaluated by the PD goal.

Next, I provide some background on the two forms of dialysis whose fabric, along with what is referred to as the 'dialysis crisis', has fashioned the PD goal. In doing so, I will discuss how the PD goal ties into the broader domain of renal care by pointing out the relationship between the dialysis crisis and the performance target. Thereafter, I show and argue for what the PD-goal does within the RCU. Here next, in the first part of the chapter, I will show and discuss a few quality indicators related to dialysis and further examine the relationship between PD performance goal and the dialysis crisis. In these parts, I draw on both my observations and publicly available documents.

In the second part, I turn to how the PD goal informs and influences everyday actions at the RCU. There, I focus on and analyse three patient–nurse interactions. These interactions can be seen as events where 'frontstage performances' (Goffman, 1959) are deployed by both the nurses and their patients. That is, what is said or done within these meetings should not be regarded as evidence or factual accounts per se, but rather as means employed by either actor to accomplish a particular goal (cf. Van Maanen, 1979). Being a 'performance target', I explore the notions of 'performance' and 'target'. When discussing targets, I draw attention to how the target is not simply the measured outcome of PD over HD; instead, it is the patient and his or her chosen treatment

form that is 'the target'. Similarly, the 'performance' is not just the aggregated outcome and final score of the PD-goal but also the decisions made and actions taken by staff members at the RCU to produce this outcome.

Background

In 2016, a so-called "dialysis crisis" struck renal care clinics across Sweden. In essence, the crisis was engendered by a shortage of specialised dialysis nurses, which, in turn, was propelled by an increased number of patients in need of dialysis. At the time, around four-thousand people in Sweden received dialysis, a number that is, and has been, increasing over the past decades. According to an investigation ordered by the regional director of healthcare services, more than ten per cent of the Swedish population show some sign of CKD (an incurable and progressive worsening of their kidney function), and half of them show significant renal failure (less than 50 per cent GFR). In other words, what was already a crisis could be expected to worsen over time.

Dialysis treatment is a matter of life and death. Without it, those in need face the risk of dying within a short time span (Njurförbundet, 2016). In brief, the lack of specialised dialysis nurses meant that patients in need of dialysis (chiefly those in HD) faced the risk of not being able to receive their life-preserving treatment. At that time, so I have been told, most cases could be solved by transferring patients to – in the best case – neighbouring hospitals and dialysis units with extra capacity, by nurses working overtime, or by the utilisation of agency staff.

During the crisis in 2016, investigations were conducted to determine what could be done to mitigate the crisis in the short-term, and to prevent it from happening again in the future. It was concluded that the principal drivers of care costs within renal care are found in dialysis treatment. If dialysis could be postponed or avoided through preventive and proactive measures, this would represent a great success in terms of financial costs, human suffering, and quality of life. Moreover, a move from HD to PD treatments, and from hospital bound HD to PD treatments performed by the patient at his or her home, would reduce costs and enable an increased care capacity. As a result, a goal was established within renal care to increase the number of patients on PD, that is, to encourage and persuade patients to consider PD as their first-hand treatment option. This is known as the PD-goal.

Determining which treatment option – PD or HD – is "better" or "worse" depends on a variety of factors, which I will address momentarily. However, for

medical and practical reasons, it is not always possible for patients to decide for themselves. However, from a financial perspective, the benefits of PD outweigh HD by far. Notwithstanding the benefits that PD may have for patients who utilise this treatment, the economic gains can largely be understood as a consequence of a shift in the division of labour from clinicians to the patients themselves. Yet both treatment forms require substantial, yet different, labour from both patients and clinical staff. In a sense, PD functions as a form of outsourcing by effectively transferring much of the labour involved in dialysis treatment from the medical staff to PD patients.

HD is likely the treatment form that most people associate with dialysis. HD is often claimed to be a highly effective treatment form, but one that takes a greater toll on the patient's body. To simplify, HD works like this: a surgeon makes an incision in one of the patient's arms to make a vascular access by inserting an arteriovenous fistula between an artery and a vein. This enables easy access to the patient's bloodstream and increases the amount of dialysis liquids that can enter the patient's body and the speed at which it can do so. HD requires patients to travel to the dialysis ward, usually three times per week, for approximately five hours of dialysis per session. During these sessions, the patient is connected to a dialysis machine, which removes blood from the body, runs it through a filter, and returns the cleansed blood to the body. Essentially, the machine filters wastes, salts, and fluid from the patient's blood that the kidneys can no longer adequately purify themselves. HD often produce side-effects, such as nausea, fatigue, and chills. While the machine operates, patients often spend their time reading, listening to the radio, watching television, or taking a nap.

PD works in a distinctively different way compared to HD. Simply stated, unlike HD, instead of draining, filtering, and pumping blood from and to the patient's body, PD purifies the blood from within the patient's body. Before a PD treatment is commenced, a catheter is inserted into the patient's abdomen. The patient's peritoneum, the lining of the abdomen, serves as a filter that removes waste products from the blood. This is achieved through a daily routine, usually performed by the patient four times per day. The process goes something like this: drainage is achieved by the patient connecting an empty bag to the catheter and relieving the body of waste products. The patient discards the waste liquids and carefully attaches a bag of dialysis liquids that gently flow into the body – the flow is afforded by gravity, not by pumps. This liquid stays in the body for four to six hours before the process is repeated.

Maintaining good hand hygiene and using sanitizers are of great importance when performing PD. To relieve the body of the effects caused by introducing either cold or hot liquids into the blood stream, the dialysis liquids are heated to 37 degrees Celsius using a special heating plate. However, to help filter out waste, chemicals, and liquids from the blood that reside within the body, the dialysis liquids contain dextrose. Warmth and sugar provide a breeding ground for bacteria that spawns a high risk of infection. Infections may prohibit the PD treatments and instead force patients into HD treatments.

Patients that undergo PD do so much at their own discretion, such as by performing the treatment in their own homes or even at their place of work. PD requires a lot of work by the patient as well as the commitment needed to ensure frequent and routine treatment – four times per day, each day every day. PD can be a laborious and somewhat daunting task for patients. Still, it is claimed to be a gentler treatment compared to HD, and to provide patients with increased levels of flexibility and quality of life. The nurses at the RCU offer substantial training sessions for patients so that they can perform their own treatments at home. Such trainings differ depending on the individual needs and capabilities of the patient and range between a few days of training to more than a month. After successful training, the patient performs the treatment by him or herself, yet PD-nurses are available to them through dedicated phone support and occasional home visits.

Setting the Stage

Before I pilot you through the interactions demonstrating how the PD goal operates in practice, I will address three important factors related to dialysis, PD, and the performance goal. These aspects are discussed in three sections of this part of the chapter, which are made up of quality indicators, the making of performers, and the act of performing.

In renal care, quality indicators are highly contested. One reason for such contestation is the nature of the disease, namely that CKD is incurable and progressive. The progression rate – at least so it can be argued – is influenced by factors that go above and beyond the efforts of clinicians. For example, a patient's age, personal choices, or multiple illnesses can all have a large impact on treatment outcomes, regardless of the efforts made by renal care staff. In other words, since patients cannot be cured and worse yet, only get worse over time, how should we evaluate the quality of care? This is indeed a tricky question. And so, while quality

indicators for renal care can be tricky or ambiguous, the reduction of treatment costs at the level of care is far less ambiguous.

In the making of performers, I address how the PD goal ties into the dialysis crisis by examining meetings between the nurses, their immediate manager, Parker, and Parker's manager, Sidney. The meeting focuses on financial incentives offered to the care unit if they accomplish a set of goals, including the PD goal. Essentially, I argue that the actions of the two managers function to establish a sense of urgency among the nurses. Having established such a sense of urgency, each set of alternative actions and solutions are effectively negated by the managers through a set of rhetorical techniques and actions. Left, as the only viable option, is for the nurses to become performers. In other words, the meeting is an example of a local accomplishment by which the nurses are made into performers of the PD goal.

In the third section, I discuss the subtle act of performing. That is, the rather subtle performances put on by the nurses to convince and persuade their patients about the benefits of choosing the PD treatment in favour of HD – and thus, effectively performing the PD goal. To show how the PD goal is, on the one hand, a powerful performance number and, on the other hand, a taken for granted part of everyday work, I draw on an allegory of a magic trick and its structure.

Taken together, as the purpose, performers, and performance are established, so too is the scene upon which the performance goal is accomplished.

Quality indicators

Below, I present an excerpt that involves Alex, a medical doctor. Here, in a discussion with me, Alex is fleshing out the two principal quality indicators of dialysis. One, as Alex mentions, is a performance target that aims to reveal the effectiveness of the treatment. It is a clinical number used to evaluate the effects of a particular dialysis treatment. The other quality indicator is a process target, and it is this target, I argue, that propels the PD-goal and provides it with legitimacy.

Alex (doctor): In principle, there are two different ways of measuring quality related to dialysis.

Alex stands up and walks across the room to a large whiteboard. Once there, Alex jots down a formula: K multiplied (*) by T divided (/) by V, and begins to explain…

Alex (doctor): The K stands for dialysis clearance rate, that is, the clearance rate of urea. It is a measure for the purification process after having diagnosed a patient with renal failure. T stands for dialysis time. V is for volume, the volume of distributed urea. So, by this measurement, that is, multiplying K with T and dividing it with V, you get a figure that is a target value for dialysis. When it comes to this measurement, some argue that a figure of 1.2 is the target to aim for. Others say that this measurement is utterly worthless. Rather, they say, the real measurement of interest is MD multiplied by T divided by P.

*As Alex says this, Alex writes the formula, MD * T / P, on the whiteboard.*

Alex (doctor): This is a process measure, rather than a performance target. Here, MD means physician time, which is multiplied by T, which stands for patient time. This is then divided by P – the number of patients.

The excerpt above is rather dense and may be difficult to fully grasp. What is important to point out is essentially the two different ways of measuring the quality of dialysis treatment. Somewhat simplified, it is possible to use the two different indicators and say that the performance target (K * T / V) corresponds well to HD. While the measurement is, of course, relevant for PD as well, for a hospital that prioritises PD over HD, it becomes a troublesome indicator of quality because the clearance rate of PD is significantly lower than that of HD. Therefore, another quality indicator must be used if a hospital should be able to claim high-quality dialysis treatment while promoting PD over HD. The alternative indicator (MD * T / P) does just that and corresponds well to PD treatments. In other words, as far as healthcare politics are concerned, it seems reasonable to expect that a hospital that promotes PD would favour the latter quality indicator, whereas a hospital that promotes or utilises HD would favour the former indicator.

Alex also argues for the cost-related benefits of PD over HD when it comes to nurses and their labour.

Alex (doctor): Right now [autumn, 2018], we have three PD nurses and little over thirty patients who receive PD. Thus, it is a very effective and inexpensive treatment compared to HD because a PD nurse can take care of about ten patients, while a HD nurse can only take care of around

> three patients at a time. So, it is an extremely cost-effective and beneficial treatment if you get it to work. But it requires a lot from the PD nurses; it requires a little more from the patients; and it requires a little more commitment from the medical doctors.

The last statement made by Alex, regarding the additional efforts required by nurses, medical doctors, and patients, deserves further examination. In terms of the PD goal, notwithstanding the professed benefits associated with PD, it may strike the reader as counter-intuitive that staff members strive to increase the number of patients in PD if it involves more work, or effort, on their behalf. It is, therefore, important to describe the process and the sequence by which a patient is enrolled in PD. Alex points out that PD patients require 'a lot' from the PD nurses. Whether or not the PD nurses embrace patients being shepherded into their care matters little. This is because the PD nurses stand outside the process of deciding between treatment options; they enter the picture after the choice has been made. In that sense, the PD nurses are generally unable to influence the number of patients who enter PD – but they are possibly able to influence the extent to which their patients remain in PD.

Despite patient-centred care placing much emphasis on the patient's choice, it is ultimately the patient's doctor who decides and sanctions their preferred treatment – although the patient can veto a PD treatment and effectively choose HD. It is plausible that some doctors, who may already be overworked, may feel reluctant to place their patients into PD, knowing that the treatment involves additional labour for them. However, to place an individual in HD against his or her expressed will and in opposition to the prevailing strategy of the hospital presumably requires a sound argument. The individuals with the most influence over the patient's decision, I argue, are the CKD nurses who meet with, inform, and prepare the patients for their choice between PD or HD. It is worth noting that the CKD nurses benefit from patients entering PD due to the PD goal. Yet, the CKD nurses are not affected by the choice in terms of facing increased labour demands. This turns the CKD nurses into an excellent vehicle for propelling the PD goal. I argue that the CKD nurses, because of the PD goal, shape their patients' beliefs to favour PD treatment, thereby arming the patients with strong opinions before discussing their preferred treatment together with their doctor.

PD requires substantial work from the patient. A subtle point that is only hinted at by Alex is that PD requires 'a little more effort' from the patients. As mentioned earlier in this chapter, neither HD nor PD are easy treatments. While HD takes

a greater toll on the patient's body, PD requires them to do more work. From this perspective, HD requires a passive patient who can be hooked on to a dialysis machine for at least twelve hours a week. PD, on the other hand, demands active patients who are significantly engaged in their own treatment (the extent of this engagement will be described in detail later in this chapter). It seems likely that the self-governing capabilities afforded by the GFR share a symbiotic relationship with the PD goal. That is, by engendering a mindset of self-responsibility and active intervention in their everyday lives, the ideal patient for PD is, in a sense, "created" by the CKD nurses through discourses of personal responsibility and increased quality of care, while downplaying the required effort needed for PD.

Assigning actors – the making of performers

The dialysis crisis and financial incentives, known as 'kidney cash' (*njurpengen*), offered by the region are tied to the PD goal. The following excerpt shows how the dialysis crisis, the kidney cash, and the care unit's goal setting are intertwined to establish a sense of urgency among the nurses. In the meeting, there were eleven people, including myself. This weekly workplace meeting hosted all the nurses at the RCU as well as their manager, Parker, and Sidney (the area manager). During the meeting, we were all seated around a large dining table within the dining area, which doubles as a conference room.

Parker (unit manager): You have all probably heard, at least a bit, about the so-called 'kidney cash', an investment in renal care made at the regional level. Specifically, 6.8 MSEK will be allocated to the renal clinic, out of the total of 44 MSEK for the entire region. The money is, in part, aimed at improving existing renal care. But much of the money is allotted for preventive measures. The rules surrounding how to spend the money are very strict; there is money for employment, but not for salaries. The cornerstones are prevention, PD before HD, and broadly solving the 'dialysis crisis'.

The first point that I wish to draw attention to is when Parker says that the money is for 'employment and not for salaries' and that this is 'very strict'. Within the RCU, the nurses frequently claim that the care unit is understaffed and that they are underpaid. Therefore, their trade union makes frequent attempts to get the hospital's management team to recruit more nurses and to increase their salaries. By stating that the money is for employment and not for salaries, and that this is

'very strict', Parker effectively negates the possibility of using the money for salary increases. What remains is money available for employment. In this context, employment means two things: money for new hires and money for overtime work. The latter, I have often been told, is how healthcare organisations survive.

Bobbie (PD nurse): In that case, we need another seven or eight nurses…

Parker (unit manager): Right now, there is one nurse in the resource pool that is available.

With this addition, Parker has effectively refuted the possibility for either of the two managers to provide the nurses with either salary increases or another colleague – at least in the foreseeable future. What is left, in effect, is increased overtime. Hiring renal care nurses is challenging. Renal care is one of the more complicated medical areas, and finding sufficiently competent nurses is difficult.

Sidney, metaphorically, takes the baton as the meeting ensues.

Sidney (area manager): This cash is meant to prevent what happened a few years ago, that things went the way they went…

Sidney finishes the sentence, pauses, and adds with emphasis:

Sidney (area manager): It was horrible! I think it was the worst thing that I have ever experienced.

The room sits in Silence.

Parker (unit manager): I remember it…

Parker looks over at Robin, who is of the more senior nurses in the group present at that time. Robin nods empathetically.

With the remarks made by Sidney, followed by Parker, two important things have been accomplished – or at least attempted – by the two managers. Since the possibilities for new hires and salary increases have been ruled out, I propose the following interpretation for the impact of Sidney's remark. The invocation of the 'dialysis crisis' can be understood as a means to instil a sense of urgency among the nurses around the table. While salary increases and new hires have been put off the table as drivers of motivation, fear of things becoming even worse has not. On that note, it can be mentioned that, in addition to the risk of another dialysis crisis, the nurses frequently claim to suffer from a poor working environment and low salaries. Taken together, what is suggested seems to be that unless they are willing to risk a new crisis, something needs to be done, and the only ones who can do something about it are the nurses. The remaining question is what should they do? Once again, Sidney takes the lead and outlines the solutions at hand.

Sidney (area manager): It is, and has been, very effective to use resources for more assistant nurses and to raise their level of competence, so that is one thing we strive to do. Other goals are to increase the number of transplants; to increase the number of patients on PD; to increase preventive care; to increase digitalisation; and to increase our coordination. We will get half the money before implementing any changes, and half the money after we have accomplished parts of the action plan. If we exceed the budget, then we will have to take money from somewhere else. So are the rules of the game; we are a political organisation, so it's the politicians that decide.

Here, alleged, and solid structural constraints emerge through Sidney's words. Having stated the goals that are tied to the so-called 'kidney cash', it is worth highlighting the fact that only half of the money is paid out before the care unit is able to show that they have accomplished at least part of the action plan. By stating that 'so are the rules of the game', Sidney effectively shuts down any opposing view. However, while it is true that the organisation is indeed a politically run organisation, Sidney is a senior manager who is, or at least could be, in a position to exercise some influence even on political decisions, at least those made by the hospital's board of directors. Or, at the very least, as part of the leadership team for specialised medicine, Sidney may be able to exert influence over the implementation of such decisions. Moreover, during the management and board meetings I attended during the study, it was not apparent to me that efforts made by senior staff members to give input and possibly affect decisions would be self-evidently futile. However, as a technique used for impression management, the statement 'so are the rules of the game' ostensibly work to effectively ward off agency and thus the responsibility associated with one's managerial role. So, since the rules have been established and the game has been suggested, only the players remain. By implication, the two managers establish the players and the roles they are supposed to play in the next and final exchange between the two of them.

Sidney ostensibly addresses the room in what appears to be a rhetorical remark…

Sidney (unit manager): It's good that we are so interested in budget work, isn't it?

Sidney turns towards Parker, seemingly teasing a reaction from Parker.

Parker (unit manager): Yes, it's fantastic!

Parker laughs in a way that makes the statement appear facetious and sarcastic, while exchanging glances with the nurses across the room.

The impact of remarks like these, regardless of the intent behind them, should not be underestimated. Rather, such remarks serve as powerful yet subtle ways to define the situation. Here, I argue that these remarks serve to mystify the budget process and obscure the subtle, yet important, distinctions inherent in budget work, the outcomes of which directly affect members of the RCU. These remarks allow the managers to downplay the significance of being able to wield budgetary numbers in the political arena, where being able to do so matters. The facetious and sarcastic melody in which their songs of sorrow are sung allows them to forge an image of two self-sacrificing managers who are doing their part, so that their subordinates, the nurses, will do theirs. However, in reality, the managers are establishing a discourse that allows them to offset their responsibility for wielding the budget numbers in a way that also permits them to present themselves as advocates for the nurses. Considering the preceding statement, there appears to be nothing left to do for the two managers, what is left lies in the nurse's hands.

Taken together, these excerpts show how the 'dialysis crisis', the PD performance goal, cash incentives, and the rhetorical techniques that are deployed by the managers – knowingly or unknowingly – all work in tandem. The sum is that alternative solutions and approaches are negated, a sense of urgency is established, and the goals are put forward as self-evident and beyond question. Unless they wish to be faced with another crisis, the nurses must meet the PD goal.

The subtle act of performing

The PD goal is an important goal for the nurses at the RCU. The ratio of patients undergoing PD and HD is frequently discussed. By throwing a quick glance at the patient data that the nursers enter into the Swedish Renal Registry, they are able to keep themselves up to date on the latest numbers – inasmuch as they are able to trust that the registry data is up to date. For example, prior to their annual performance review with their manager, Parker, both Casey and Robin (nurses) looked up the latest numbers in the registry and, as I was told, they mentioned the current 60/40 (PD/HD) ratio as an important part of their work performance. In fact, for nurses like Casey and Robin, the PD goal is arguably the clearest quality indicator available to them – and their manager – for evaluating their performance. Below is an excerpt where Casey explains the PD goal and its rationale for me.

Casey (nurse): The hospital is trying to steer more patients towards PD, which is a gentler and less resource-intensive treatment – because the treatment takes place in the patient's own home. HD is more effective, but it takes a greater toll on the patient's body. More so, since it is an active treatment that takes place at the hospital, it requires medical staff, specifically nurses, and sometimes doctors, who are specialised in renal care – something there is a great lack of.

In magic performance acts, there are said to be three parts: the *pledge*, the *turn*, and the *prestige*. The pledge is a promise to make something happen, such as when an object is promised to disappear. At the turn, the object is made to disappear, or whatever else was promised. Finally, the prestige is to make it reappear and reap the reward. Casey's reference to 'the hospital' in relation to 'steering more patients towards PD' can be seen as analogous to the pledge, but it is ambiguous. Taken at face-value, the statement suggests the presence of a vague authoritative body that is exerting influence over the patient's treatment choices – 'the hospital'. Clearly, Casey is part of 'the hospital', in terms of being an employed nurse, yet the phrasing 'the hospital' rather than 'we' suggests that there is an agency, other than Casey's own, that is operating. In other words, this agency can be understood as the PD goal, which is sanctioned by the hospital – or rather, the hospital's leadership team. This way of obfuscating individual agency and turning the act into a description of depersonalised and objective happenstance, rather than as actual efforts by individual and knowledge agents, is the turn. However, it is not a vague authoritative body that drives the nurse, it is the performance number that elicits an action. Once again, we find that the conjuring of a structural entity facilitates a disappearing act – that of individual responsibility and agency. The prestige is to be able to account for one's individual agency when it is time to reap the rewards of a successful performance.

The use of the word 'active' in relation to HD deserves further exploration. Earlier in this chapter, I claimed that HD is a 'passive' treatment, and PD is an 'active' treatment. Now, Casey makes a partly contradictory claim. This is because Casey refers to the treatment from the point of view of the medical staff – something that is reflected by the excerpt as a whole. The dichotomy of active and passive and the different perspectives from which this differs are important and go to the heart of the PD goal. That is, HD is an active treatment because it takes up a significant portion of resources, whereas the goal of PD is to shift these activities from the medical staff to the patients. Much simplified, HD engenders passive

patients, but active clinicians – in terms of labour power. Whereas PD effectively does the reverse, it incites active patients, and "passive" clinicians.

The effects of PD can be measured in terms of its impact on the patients' self-perceived quality of life – measured by RAND36, a self-assessment form aimed at measuring health-related quality of life. An increase in patients on PD can be argued to be a direct result of the efforts made by the nurses, despite the previously depicted escape from personal agency and responsibility. In the upcoming excerpt, Casey presents the PD goal as a success story born out of necessity. In doing so, the 'prestige' is revealed as individual, and collective responsibility is placed at the fore by a change from the passive and anonymous 'hospital' to an active and salient 'we'.

Casey (nurse): To increase the number of patients on PD is another goal for patient safety. We have doubled the number of patients on PD from 20 to 40, and we have gone from two to four PD nurses. PD facilitates a better quality of life for patients. We have succeeded with our goals, but only out of necessity; HD treatments have not been possible. We have had a good collaboration with the municipality and the local politicians, largely thanks to Alex. This is important because PD might otherwise be experienced as something 'new' or 'strange' by them. We are focusing on being accessible to people on PD, or home treatment. It is important how PD is presented to the patients when they are introduced to their treatment options. That they will get training, which is adapted to their individual needs. The patient should feel secure with the treatment, and that it statistically achieves a higher quality of life.

It is worth repeating the importance of Casey's use of the word 'we' in this excerpt. The point I am making when stressing such language use is not necessarily that it reflects a conscious effort to side-step, and later shoulder, personal or shared responsibility. My point is that such an oscillation, regardless of intent, can accomplish such a performance. Quite clearly, statements like 'we have doubled' and 'we have succeeded' suggest a strong agency on behalf of the nurses.

On a few occasions, Casey alludes to the need for impression management. The impressions of local politicians should be managed for them not to experience PD as something 'new' or 'strange'. The impressions of patients should be managed for them to feel safe with the treatment and to be convinced that they will be

better off with PD than with HD – that is, that they will achieve a higher quality of life.

The statement that patients 'statistically achieve a higher quality of life' is interesting. Statements like this are frequently used in patient-nurse interactions, yet despite their ostensive forcefulness, they may be rather hollow unless they are fleshed out. For example, there may be a marginal difference between the two treatment forms, and any difference can be based on an average score that may, in turn, reveal significant outliers on both ends of the spectrum. In other words, it is a strong statement and one that may very well be true, but over the course of my fieldwork, I have never seen the claim substantiated by any actual or formal evidence. Instead, it is made as a general truth claim, detached from the particular circumstances of the patient to whom it is made.

The PD Goal Engenders Systematically Distorted Communication

The PD goal influences the nurses in their interactions with patients and engenders performances that generate 'systematically distorted communication' (Habermas, 1984). The PD goal fosters and encourages performances by the nurses, aimed at persuading their patients to favour PD over HD. I argue, perhaps harshly so, that these performances draw on 'bad faith' arguments and by essentially negating the concerns made by their patients. I argue that, in effect, a systematically distorted communication is engendered by the performances put on by the nurses as an effect of the PD goal. The implication of this is that a closed off system of thought and action is produced and reproduced, namely the favouring of PD over HD and the shutting down of explorations of negative aspects of PD, and potential positive aspects of HD for the patient. Instead, within these information meetings, despite appearing as open forums where patients can discuss treatment forms and make informed decisions, the meetings have a strategic undercurrent that steers the nurses towards persuasion attempts and the patients towards PD.

The argument that I am making does not pertain to whether PD or HD is the preferred treatment for patients at the RCU. Rather, it focuses on how the PD goal generates performances that target the patients' understanding of the treatment options that are available to them. Of particular importance is that the

meetings that I present below are all so-called "information meetings". This is important because it suggests, in contrast to meetings where patients are summoned to decide on their preferred treatment option, that the point of the meetings is to enable patients to make informed decisions about their treatment. The performances put on by the nurses in these meetings are scripted and follow a similar style, regardless of which of the two nurses put on the performance, or who is the recipient. The basic meeting structure is to update the patient on his or her latest test results and, if the nurses deem it necessary, discuss CKD more generally. The showpiece is a live demonstration of a PD treatment performed by the nurses in front of the patient.

In the forthcoming, I present and analyse three longer excerpts, all from the same type of information meeting. All excerpts involve Casey or Robin, both nurses. The excerpts show three patients, Lennart, Susanne, and Hugo. All patients have reached the point of their illness progression where the threat of dialysis is lurking around the corner. The nurses employ various strategies to shape their patients' beliefs that PD is indeed the preferred treatment. They invoke norms of legitimacy through statements presented as objective facts and subtly refer to vague or abstract bodies of professional expertise, homogenous patient collectives, and occasionally, by referring to their own professional expertise and experience.

Performances of discursive closure

The upcoming excerpts depict an interaction between Casey and Lennart. The purpose of the meeting is to review Lennart's test results and inform him about his treatment options – HD or PD. In these excerpts, Casey constructs PD as a significantly more favourable option than HD. What is most interesting about this is the implications such a construct has for Lennart's ability to reach an informed decision about his treatment options. In essence, I show some of the rhetorical techniques used by Casey to negate critical comments made by Lennart and his spouse, which impede their attempts or possibilities to explore controversies or opposing views – such as to explore the difficulties of PD or to challenge the benefits of HD. In other words, these excerpts demonstrate how the PD goal and the performances it engenders form a kind of 'discursive closure' (Deetz, 1992).

Casey (nurse): Based on the latest test results, there are no major changes [to your kidney function]; this is good news. In

principle, the best one can hope for is a slow decline over a long period of time.

Lennart (patient): How long will it take until I must start with dialysis?

Casey (nurse): That is difficult to say. The important thing is to prepare different alternatives in good time. There are two alternatives, that is, two forms of dialysis. We usually recommend PD, or as we call it 'home-dialysis'.

Lennart seems a bit confused, he is an older man who appears to be alert but a bit sluggish. His wife is there to assist him, and she collects two pamphlets from Casey: one about PD and another about HD.

Casey (nurse): As we approach it, I will arrange more meetings to discuss treatment options. For now, this is just about general information and preparing you for what is to come.

A couple of things have happened thus far. I find it interesting that Casey highlights the importance of preparing different alternatives, yet quickly positions PD as the recommended or favoured treatment. The sentence 'We usually recommend PD' is insightful. Casey's use of the collective "we" is not further qualified, but in this context, it is difficult to come to a different conclusion than it being a claim to a professional body of expertise, either in the form of specialised nurses or healthcare professionals more broadly. By deploying the word ("we"), Casey conjures up a strong claim to authority. The word 'usually' also holds some significance in terms of what it could, but ultimately does not, reveal. That is, under what circumstances is PD not recommended? In effect, the word 'recommend' becomes hollowed out. On the one hand, as a recommendation, the alternatives are framed as choices available to Lennart, yet the lack of exploration in terms of HD and Casey's claim to authority effectively negates, or obfuscates, such choice. In other words, the opportunity to make an informed choice other than PD is diminished.

By stating that more meetings will be arranged to discuss treatment options, Casey subtly shuts down the option for Lennart or his wife to further explore any questions they may have at this point. This interpretation is reinforced by the last sentence, suggesting that the meeting is 'just about general information', which implies a scripted and one-directional way of communicating. Taken together, 'general information' may be understood as an attempt to persuade, rather than to inform, as the latter implies more equal weight to be given to both alternatives. At the very last part of the sentence, Casey states that the meeting is meant to

'prepare' Lennart for 'what is to come'. In the immediate context, the statement refers to the commencement of any dialysis treatment. However, as we shall see in the forthcoming, by advocating the supremacy of PD, the implication seems to be that PD treatment 'is to come' for Lennart, and it is this treatment that he is now to be prepared for. Casey continues:

Casey (nurse): In HD, two blood vessels are connected to increase the throughput of blood. That is, to be able to pump larger volumes of blood. The treatment is performed three times per week, four to five hours each time. It is an effective treatment, performed by a machine. We always try to start with PD because it is a gentler form of treatment – at least so I say, who has been working with this for some time. In HD, the treatment has to be made more effective and intense, which generates side effects, such as fatigue, nausea, and low blood pressure. You may faint because the heart struggles to compensate for the blood pressure drop. It's a matter of weighing the pros and cons, but HD is better to avoid if possible. PD, on the other hand, works like this: a PD nurse provides you with individual training. This goes on for anywhere from two days to two or three weeks. It is a daily treatment, at least three times a day. It is less effective, but gentler. A little treatment all the time. Three to four times a day, every day. If the patient feels good, it may be possible to decrease it. If it is accompanied by good medical values and the doctor says that it is okay.

The first thing that one might notice is how HD is framed as a tough treatment that appears as rather violent, mechanical towards the patient, who is surprisingly absent from the image Casey conjures up. A machine actively pumps blood in and out of the body, increasing the throughput by connecting two blood vessels, causing the heart to struggle to compensate, resulting in significant side effects to the body. The only reference made to the patient is that 'you may faint'. The patient is described in a manner that forms an image of an almost 'dehumanised' and passive body being acted upon by a machine. In contrast, PD is positioned as a 'gentler' form of treatment. Here, Casey invokes both the professional community – with his use of 'we' – and reinforces the statement by appealing to Casey's own expertise and experience - 'at least so I say, who has been working with this for some time'. Thus, in addition to conjuring a vague professional body of expertise, Casey also deploys what are ostensibly personal inner dispositions

and professional experience in a plea to Lennart. Then, when explaining PD, the patient is placed on centre stage – 'a PD nurse provides you with individual training'. Moreover, Casey implies that it may also be possible to reduce the frequency of treatments. One wonders whether a similar logic could have been applied to HD, but such questions remain unasked and unanswered.

Casey states that 'it's a matter of weighing the pros and cons', yet instantly adds that 'HD is better to avoid if possible'. Thus, PD is framed as a universally favoured treatment, while HD is depicted as a worst-case scenario. Taken together, this form of arguing is suggestive of an argument made in bad faith. That is, despite claiming to weigh the 'pros and cons', these factors rather appear to be skilfully mobilised, highlighted, and downplayed to present one alternative as distinctively better than the other. This statement can thereby be seen as a rhetorical technique that signals a call for an objective and nuanced assessment but one that ultimately undermines one alternative. However, the rhetorical act frames the alternative in such a way as to make an informed assessment impossible, or at least very difficult for the patient. What is more, while PD may be gentler treatment from a medical perspective, it can be a far tougher treatment for patients at a practical level. This is exactly what is suggested by Lennart's spouse here.

Lennart's spouse: Then we will have to get another maid. It sounds troublesome.

Casey (nurse): Yes, it is a bit troublesome. But not as much as you might think. Each treatment takes about thirty minutes, in the morning and at lunch. Then if you go visit friends, you do it before and after. It is flexible and easy; it takes less time than walking the dog. For the sake of dialysis, you probably won't need an extra maid.

The passage above shows how patients or their spouses express concerns about the extra work required by them to perform the PD treatment. However, rather than acknowledging that PD does require some additional effort by the patient – an effort that may be worth making – issues like these are instantly met with counterarguments, or additional arguments in favour of PD. This way of "informing" reinforces my interpretation that these meetings are more about persuasion than objective or nuanced information sessions. It is also worth noting the imagery that Casey uses – 'visiting friends' and 'walking the dog' – which reveals the contrast between the passive patient being hooked on to a machine, and the active PD patient. This claim is further reinforced by Casey stating that

'it is flexible and easy', which is a direct negation of Lennart's wife's impression that it 'sounds troublesome'.

Casey leaves the room to bring in and show the equipment used for PD. Lennart's wife turns to me and says, "that was a lot". After a few minutes, Casey returns and starts to install the equipment just collected and brought in to the room. Casey then begins to present the different parts of the equipment.

Casey (nurse): It is part of the everyday routine. Does it feel difficult?

Lennart (patient): Yes…

Casey shows the couple a fairly large carton that contains bags of dialysis liquids. It is difficult to judge the size by any exact measurement, but I estimate the carton to be approximately 100cm (L) x 50cm (W) x 25cm (H).

Casey (nurse): You will need seven of these cartons per week containing four bags of dialysis per day. Each carton contains four bags. We order the first cartons for you. Then, when you feel more comfortable, you can order them by yourself.

As Casey continues to show the other equipment needed, I am myself shocked by the size of the carton, the sheer volume implied by receiving and storing seven of them each week, and the amount of work it all seems to imply.

Casey pre-emptively addresses the workload suggested by the equipment and the sheer volume of dialysis liquids that are implied by stating that is 'part of the everyday routines'. However, when Lennart expresses that he feels like "it" is 'difficult', his feelings are not further explored or addressed by Casey. There is some ambiguity about what "it" refers to, for example "it" can refer to the emotional turmoil of commencing dialysis, the difficulties of absorbing all that Casey is saying, or the act of performing the PD treatment. Casey seems to interpret Lennart's utterance as a combination of the latter and starts to explain the procedure. In doing so, an ostensibly emotional issue is reframed as a practical concern.

Casey (nurse): Casey is wearing a vest to demonstrate how Lennart would use the equipment. Each treatment takes about 15 minutes.

Casey points at the vest…

Casey (nurse): This should go out.

Casey then turns and points at the dialysis bag…

Casey (nurse): This should go in. When all is out, you measure it and write it on a protocol; it should be somewhere around 2-2.4 litres. You accumulate a lot of waste performing this treatment; there is a lot of plastic, but it is environmentally friendly plastic. But you get help with the waste through something called 'PD-service', each week.

Lennart's wife gasps, sighs, and shakes her head…

Lennart's spouse: That was a whole lot…

Casey (nurse): It is because of all my babble. But it is not rocket science. Hygiene is important, hand sanitizer three times, before any contact with the mouthpiece; you will have continuous contact, support, and home-visits [from the PD nurses].

Casey pre-emptively addresses the accumulated waste by referring to the PD-service. Most equipment is single-use items, wrapped in plastic, thus producing a lot of waste materials. However, when Lennart's wife says that it is 'a whole lot', she seems to be referring to the PD procedure. That being said, there is some ambiguity as to whether her statement refers to the detailed demonstration given by Casey or by the work required by the couple implied by the PD procedure. Yet again, rather than to address and explore the concerns expressed in the room, Casey sets out to counter them. By stating that it is 'not rocket science', Casey effectively negates the assessment made by Lennart's wife that it is 'a whole lot'. Casey reinforces the argument by adding another pro-argument – that they will have 'continuous contact, support, and home-visits'.

It is worth reflecting on the seemingly inconsistent message that the treatment, on the one hand, is 'not rocket science', implying that it is easy or at least not too difficult and, on the other hand, that it requires 'continuous contact, support, and home-visits'. Such inconsistencies reveal how the performances aimed at persuading patients of PD as the preferred treatment option fail to account for and explore some of the issues associated with the treatment. That is, rather than engaging in a mutual exploration of the cons associated with PD, these are either downplayed or met with additional pro-arguments. In effect, patients may be persuaded but not necessarily informed.

The performance by Casey ultimately boils down to how the choice between PD and HD is presented. I argue that the communicative act deployed by Casey functions as a form a 'discursive closure' (Deetz, 1992). As I have shown, while

Casey often mentions that there are pros and cons associated with both treatment options, the cons of HD are stressed, while little or no efforts are made to nuance the professed disadvantages. On the other hand, when the PD treatment is mentioned, the pros are stressed, and when cons are mentioned, these or the concerns they engender are downplayed, negated, or met with additional pro arguments. Through these acts, opposing views held by the patients, along with their ability to explore controversies attached to the different treatment options, are averted. Through the discursive closure that is established a genuine dialogue between the nurse and the patient, is impeded along with the patient's ability to reach an informed decision about his treatment.

Performances of matters of fact

In many ways, these next excerpts follow a similar structure as the preceding part of the chapter. For the sake of brevity, I will place more emphasis on additional aspects and differences, rather than on the similarities between the excerpts in these two parts. A clear similarity, however, is how the meeting acts as an arena for persuasion attempts. Yet, some of the techniques deployed in this part are worth pointing out. Among them are references to facts, the appeal to 'a higher quality of life', as well as the framing and categorisation of PD as a 'first hand choice' – which turns HD into the second-hand choice. All in all, the rhetorical techniques used establish several viewpoints as matters of fact, and alternative viewpoints are dismissed or glossed over. In effect, although the patient is said to have a choice, this choice is effectively pre-made. The chance to achieve a 'genuine consensus' is thereby, essentially offset (cf. Alvesson, 1996; Prasad, 2015).

The following excerpts depict an interaction between Robin, Susanne (whom we met in the previous chapter), along with Susanne's son. Susanne is in her mid-seventies, clearheaded, and alert, despite her frail appearance. She has been treated for CKD before, around fifteen years ago. That treatment had resulted in a dramatic improvement of her GFR and corresponding values, so much so that she has thus far been able to avoid further treatment, until now.

Robin (nurse): […] below 15 per cent [GFR], we talk about dialysis. Then, we talk about home treatment or PD, which gives the best quality of life. It is also a gentler form of treatment for the body.

Of particular interest is the claim that PD 'gives the best quality of life'. This is a strong claim that is presented as a firm, objective statement of fact. Yet, it is very

difficult to establish its veracity and more so, under which circumstances it holds true. As it stands, the statement seems forceful, but hollow. Notwithstanding its veracity, by making the claim PD is clearly presented as the preferred treatment. The assertion, thus, acts as a powerful claim to 'facts' aimed at establishing a particular way for Susanne to relate to her treatment options. As will be shown momentarily, by establishing this fact, Robin is able to categorise the two treatment options as better and worse in terms of quality of life, and thus make a forceful attempt to persuade Susanne to favour PD over HD.

Susanne (patient): Is PD done around the clock?

Robin (nurse): What you do yourself is the swap; you tap out the liquids you have in your stomach, then you inject new dialysis liquids. You do such swaps four times a day, every day. It takes around 30 minutes each time. There are pros and cons with both treatment forms. It is the same amount of liquid going in and out every time, two litres in, two litres out, spread out over 24 hours. You measure the amount of liquids that you tap out. There is a need to keep track of this, and there is a protocol that one follows. Everything is about quality of life.

Again, we see that the 'pros and cons' of both treatment forms are mentioned, but this seems more like a rhetorical move than an exploration of the two alternatives. As a rhetorical move, the statement bestows the argument with a sense of objectivity and nuance. The implication is that, by weighing the pros and cons of both treatment options, patients can make an informed decision about their preferred treatment. This, in turn, implies that it is the patient's choice. But, because of the way in which the treatment options are framed, PD appears as the only viable option. As seen in the passage, when Robin states that 'everything is about quality of life', Robin aims to effectively offset the option of choosing HD. If everything is about quality of life, and PD allegedly provides a higher quality of life, there seems to be little reason to select HD over PD.

Susanne's son: What works best for the individual.

Robin (nurse): One has to find one's own way forward.

Susanne's son: It's very individual…

Robin (nurse): It is entire days for HD, and one gets very tired afterwards; it is an intense treatment.

Susanne's son: Two hours a day, each day is nothing compared to losing an entire day every other day!

Susanne (patient): It becomes a habit; one learns to live with it…

At the outset, Susanne's son makes a remark about quality of life and asserts that quality of life, and how it is best achieved, depends on the individual. In effect, his remark subtly challenges the notion of a 'statistically higher quality of life'. In other words, the laws of large numbers differ from the rules of each individual's unique circumstances. That a higher quality of life is statistically achieved matters little for outliers. Thus, the remark 'what works best for the individual'. Robin's reply, that one must 'try out one's own way forward', suggests an open-ended stance towards both treatment options and suggests that the individual's unique circumstances are key for making a decision. But realistically, the patient will be placed on PD with very limited options of "trying" HD. Both treatment forms require surgical incisions at least one month prior to commencing the treatment. Thus, it is not a simple matter of switching between them. Once on PD, it is conventional to have solid medical reasons and justification to switch to HD. Despite seeming to place the patient and her choice at the centre of attention, only a chimera is conjured. A case in point can be made by noticing what is missing from this passage – the patient, Susanne. Taken together, the absence of the patient, along with the emptiness of remarks made to reinforce individualism of treatment needs and quality of life, is suggestive of a discourse of 'patient-centred care'. By invoking such a discourse, a performance is made to convey individuality and choice, despite a preordained outcome – PD.

Again, the point is not that HD is 'better' than PD and that patients are somehow tricked into a treatment that leaves them worse off than if they were to choose HD. For example, Susanne's son seems to be in great favour of PD over HD. The point, which is an important one to reiterate, is how the PD goal engenders performances by the nurses. These performances offset the chances for patients to explore both treatment options and make a fully informed decision on what suits them best and their unique circumstances. However, there may be good medical – and financial – reasons to favour PD, but these reasons are often downplayed or glossed over. This is because accomplishment of the PD goal – and the avoidance of another dialysis crisis – is prioritised over an open and fully transparent exploration of treatment options. Thus, the performances engendered by the PD goal effectively keep patient-centred care at the level of discourse.

Robin (nurse): Patients first get all the equipment through home delivery, those who do the delivery also pick up the

trash. There are a lot of practicalities. One comes here to receive training, for as long as it is needed. For some, training goes on for a few days, while for others, it takes a few weeks. When both the patient and the nurse feel that the patient is ready, the nurse comes to the patients' home and helps to set up everything. Because sometimes, even if the tools and treatment are the same as the one we teach here, it may feel different at home, so the PD nurse assists with that.

Susanne's son: It is very well thought through.

Robin (nurse): PD is the first-hand choice.

Robin's gaze travels from the son to Susanne.

Robin (nurse): My first impression is that you seem to be doing well.

Susanne (patient): I hand in all the test samples. I take my medications. I do what I need to do.

Robin's expressed preference of PD over HD is significant. At this stage, the discussion has moved from weighing pros and cons of each treatment to establishing, as a matter of fact, that PD is 'the first-hand choice'. The question, however, is for whom? For the medical staff at the RCU, PD is indeed the preferred choice. Yet for the patients, the choice should perhaps be more open-ended. At the very least, patients should be able to explore what the different treatment options might mean for them and the implications it has for their everyday lives.

Robin places all the equipment needed to perform a live demonstration of a PD treatment in the middle of the room. It is a small room, and there is a lot of equipment. Robin takes out a dialysis bag out of a carton that is lying on the floor. There are four bags in a carton like this. One container is needed for each day, every day of the week. Robin points at an IV-pole, and a small metal table. On the table is a heating plate that looks like some form of kitchen appliance. Below the table are a few boxes containing plastic gloves, sanitizer, and wipes.

Robin (nurse): You will get all of this delivered to your home.

Susanne looks at the carton, the rest of the equipment, and then eyeballs the carton.

Susanne (patient): So, you deliver all of that?

Robin (nurse): Yes.

Susanne (patient): It looks like a whole lot…

Robin (nurse): One gets used to it. You can start with half a litre, then one litre, then one and a half litres, and finally two litres. The body will adapt.

The way in which statements are made into 'matters of fact', and the explorations of alternative viewpoints are shut down, seems to impede the possibility for a 'genuine consensus' (Prasad, 2015 p. 146 f.). Susanne's statements seem to imply either, or both, that PD seems difficult to her on a practical or emotional level. Yet, once more, concerns about the PD treatment and the work it requires the patient to perform are met by Robin with counterarguments, such as 'the body will adapt' and 'one gets used to it'. It is well worth noting what is missing. Absent from these discussions are explorations that pertain to the patents' preferences. For example, in line with the so-called 'patient-centred care', meetings such as this could, in theory, be structured around the patient and her preferences, disposition, and habits. In such meetings, the nurses could, together with their patients, explore the different treatment forms, their pros, and cons, and what might be most suitable for each individual patient – rather than assuming, *a priori*, that PD is and should be the favoured treatment.

The structure of performance

These last excerpts show how Robin informs Hugo (whom we met in chapter six), about his treatment options. As we join their interaction, Robin prepared the room for a demonstration on how PD works. Robin is standing in the middle of the room, a box of dialysis liquids is placed on the floor next to Robin, beside an IV-pole, a small metal table, and an assortment of miscellaneous equipment needed for the procedure. Hugo is sitting in a chair at the far end of the small room, sizing up the equipment and appearing to be alarmed by it.

Robin (nurse): All the equipment will be delivered to your home.

Hugo takes a deep breath and leans over to one side of the chair, resting his elbow on the armchair and his head on his hand…

Hugo (patient): I talked to a former dialysis patient; he was devasted.

Robin (nurse): Do you feel that this is difficult information to take in?

Hugo shrugs his shoulders…

Hugo (patient): What is the difference between PD and HD?

Robin (nurse): HD is done by a machine; you come into the hospital three or four times a week and stay for a few hours of dialysis.

Hugo smiles and seems to like the idea of utilising a machine…

Hugo (patient): I recently started to listen to podcasts.

Robin (nurse): PD is a more flexible and gentle treatment; therefore, one wishes to start with PD.

When Hugo says that he 'recently started to listen to podcasts', the implication, which Robin seems to pick up on, is that he may prefer HD over PD. The implication being that, by listening to podcasts, he might be able to overcome the boredom of being hooked on to a machine regularly for several hours at a time. What is of particular importance is that instead of exploring this option, Robin quickly presents a counterargument, emphasising that PD is a more 'flexible and gentle treatment'. Even more forceful is Robin's claim that 'one wishes to start with PD'. Here, rather than being a recommendation from the medical professionals that both Robin and Casey draw upon when using the word "we", "one" suggests and conjures an abstract body of patients claimed to prefer PD over HD. Through this rhetorical move, Hugo is positioned as someone who – despite implying that he could prefer HD – should wish to start with PD.

Hugo observes carefully as Robin demonstrates how the PD treatment is performed…

Hugo (patient): How long does it take?

Robin (nurse): Thirty minutes, 20 minutes for the waste liquids to go out and 10 minutes for the dialysis fluid to go in. It is important to use plenty of hand sanitizer. Tap out as much of your liquids as possible – one can sense when the stomach is empty – then you inject two litres. There is a protocol where the weight of the liquid that came out is entered after it has been measured.

Hugo (patient): [Microsoft] Excel!

Hugo says this with satisfaction – he has previously said that he is a competitive person who likes to use excel to measure different aspects related to his disease, his body, and his treatment.

Hugo (patient): This is a full-time job!

Robin (nurse): You can enter an alarm on your phone, 'now it is this, now it is that'. It is important that one's life should continue to function as normal. One has to adjust one's life to dialysis, and adjust the dialysis to one's life.

When Hugo expresses his concerns that the work required of him to perform the PD treatment is 'a full-time job', Robin dismantles his concerns without directly refuting them. While the overall message that Robin conveys is upbeat – 'one's life should continue to function as normal', it is phrased vaguely. The message seems to be that it is a lot of work, but manageable. More importantly, the ability to adjust one's life to dialysis and vice versa, corresponds to, and reinforces the previous claim that PD is a more flexible treatment option. In effect, Hugo's concerns about PD are downplayed.

Hugo (patient): When will I start dialysis?

Robin (nurse): We will have to wait and see what they say after the next test results.

Hugo leans to the side of the chair once more, takes a deep breath, and sighs with a long exhale…

Hugo (patient): I will almost have to bring a trailer with me when I visit next time.

In a matter of seconds, Robin's face looks stern, the body tenses, Robin takes a deep breath and looks as if about to speak…

Hugo (patient): No, no, I am only joking.

Robin (nurse): The regional services take care of transports of this kind. *Points at the carton of dialysis liquids placed on the floor.* Seven such cartons will be needed and delivered each week, some extra should be kept at home just in case.

Hugo's facetious remark about bringing a trailer is intended as a joke, yet the amount of dialysis liquids needed to perform PD on a weekly basis does, as a matter of fact, almost require a trailer. Again, Robin addresses Hugo's concerns by ensuring him that its transportation will be handled by the regional services. Despite being framed as two alternatives, HD is generally mentioned only insofar as it reinforces the notion that PD is the superior alternative. Moreover, even when critique is launched towards PD, it is met by solutions, negations, or topical avoidance; HD is never discussed as an actual alternative.

Robin (nurse): How do you feel about the dialysis treatments?

Hugo (patient): Everything that is home is better than being here...

Hugo's final comment may seem harsh, but it is most likely best understood as reflecting a favourable view of PD rather than a critique against the hospital. Hugo's reply suggests that the persuasion attempts made by Robin has either been

successful or unnecessary. However, I would like to point out the sequencing of the encounter. That is, it is only after a thorough demonstration and persuasion attempt that Robin asks Hugo how he feels about his treatment options. This is reasonable considering that the meeting is structured around Robin providing information about the two treatments. Yet such a structure is not inescapable. For example, patients are usually offered reading materials on both treatment forms. Rather than presenting such material during these meetings, patients could receive it before the meetings. They would then be better informed about their treatment options, and rather than ending with a question such as 'how do you feel about the dialysis treatments', such a question could be used to initiate a more open-ended dialogue about the different treatment options.

Taken together, I argue that the PD goal influences the structure of these meetings by encouraging nurses to perform acts aimed at influencing and persuading their patients to favour PD over HD. In a subtle manner, an important aspect of the performances put on by the nurses lies not only in what is said – or left unsaid, or unanswered – but also in how the meetings are structured. Although the meeting is framed as an opportunity for the patient to learn about the two treatment options, the performance itself is made in a way that focuses almost solely on PD, the benefits of PD, and how potential issues of PD can be managed. Hugo, it seems, would likely have chosen PD regardless of the performance put on by Robin. However, what is interesting to note are the various and alternative ways the patient – Hugo – might have come to this decision himself without being targeted by the performances put on by the nurses to accomplish the PD goal.

Summary

Although it is nowhere to be found within the informational meetings between the nurses and their patients, the PD goal permeates almost every aspect of these meetings. It affects the structure of the meetings, their contents, the performances made by the nurses, and prescribes the ultimate outcome for the patient. The situation, the acts, the agency, and the purpose of the meeting is dominated by the PD goal, so too are the discourses, interpretations, and actions that are favoured or disparaged. These information meetings are profoundly shaped by the PD goal, as are the actions taken by the nurses, and the interpretative possibilities that are presented, or shut closed, to the patients. So, the question arises: is this a good or a bad thing?

Good and bad are almost always arbitrary; once they have suckled on to a subject, questions pertaining to either or ultimately become one of perspective. When? In what way? For whom? This kind of ambiguity also holds true for the PD goal. If funnelling patients into PD can prevent or at least alleviate a potential dialysis crisis, surely, this is good. At the same time, perhaps such solutions obscure underlying structural issues – such as alleged poor working conditions that deter nurses from their occupation, a rampant increase in the number of people in need of renal care in society, or a supposed over prescription of medical treatments for patients. Some patients may greatly favour the alleged flexibility of PD – doing a 'little' everyday, while others may favour the effectiveness of HD – doing 'a lot' some days. The choice between treatment options depends on a variety of factors, many of which are beyond the patients' control, such as medical, financial, and practical constraints. However, insofar as I wish to make any value judgement at all, it is this: because of the pervasive nature of CKD and the impact of dialysis on the patients' everyday lives, what is ultimately a good or bad treatment form should ideally, and to the extent it is possible, be left up to the patient to decide.

The PD goal, it seems, is 'over-performing'. Not in a numerical sense, as in there being too many PD treatments to handle, but in a performative sense. The performances put on by the nurses are convincing, but the extent to which they are necessary to persuade the patients is debatable. However, I am not too concerned with the choices made by the patients per se – they and their clinicians are much more competent and qualified to make those decisions than I could ever hope to be. What does intrigue me, however, are the processes through which the patient's decisions are made and how the PD goal affects these processes. It is towards these processes that I now turn.

The PD goal is an example of a larger phenomenon – performance targets. Therefore, I wish to reflect a bit more broadly on what the PD goal is doing as a performance target and its implications for such targets more broadly. To reiterate, I argue that the PD goal generates three parts that constitute the performance goal – performers, targets, and performances. The performers seem to be driven by a sense of urgency – instilled by the looming threat of a dialysis crisis – and quite possibly, by the accomplishment of their departmental goals and a sincere belief in the benefits of PD. By outcome, or result, I mean the PD goal is the ratio between patients on PD and HD. That is, patients enrolled in PD, a number showing the ratio between PD and HD, an outsourcing of labour – from the medical staff to the patients – decreased treatment costs, and increased revenue due to financial incentives tied to the fulfilment of the PD goal. The target of the

performance goal is the patient, or more accurately, the ways in which the patient is made to understand the treatment options and ultimately favour one over the other.

The PD number is performing in a dual sense. It engenders performances, and it generates effects. The performances put on by the nurses may vary a bit, but, in principle, they follow a similar logic of impression management and persuasion. I have argued that the rhetorical techniques used resemble a kind of discursive closure. Through negations, counterarguments to HD, arguments in favour and support of PD, and so on, the nurses ultimately shut down alternative views and decisions. When I say that the PD goal is 'over-performing', I mean to suggest two things. First, that the PD goal engenders a perlocutionary effect that provokes performances by the nurses aimed at persuading their patients. Second, the way in which these performances are played out is perhaps unnecessarily forceful. That is, it does not seem unlikely that the result – the patient enrolling in PD – would be the same even without these forceful persuasion efforts. This is why the effects of these performances are so intriguing.

The principal effect of the PD goal, I argue, is a form of systematically distorted communication. These effects are systematic because of the undercurrent of strategic, political, economic, and ethical motives that propel the PD goal. They are distorted because the "real" motives are covert for the receiving end of the performance – the patient – and because there are few or no opportunities for the patients to examine the truth claims made by the nurses, explore alternative viewpoints, and because the opportunity for the nurses and their patients to form a genuine consensus is significantly impaired. It is, however, worth noting that I am chiefly concerned with the process of these performances and not with the result. PD is, arguably, a treatment that many patients would, and do, prefer. This is, in part, what makes the performances I have shown in this chapter so intriguing. Because it is likely that the end result – the number of patients in PD – could – in principle – be the same even without the performances made by the nurses. In other words, the outcome could be the same, but the process could be different and consequently, the effects of the systematically distorted communication that I have described could be lessened, and the capability for the actors to approach a genuine consensus could be increased.

CHAPTER 8
THE BHC NUMBER: CLOSED DOORS, FROSTED WINDOWS, AND CLEAR CUT-NUMBERS

Introduction

In this chapter, I trail the making and performative implications of an administrative number – the Basic Hygiene and Clothing (BHC) compliance rate. I also show how the principal agents in this chapter both make up and make use of the BHC number in imaginative ways. Most of the empirical material used in this chapter stems from me shadowing nurses Casey and Elliott, during a full day of work while they were tasked with carrying out the BHC observations. During the time I spent shadowing them, I followed in their footsteps and was able to see and experience, first hand, what the making of the BHC number is like. I also draw on my observations of these actors and their interactions made on the specific day and other days during lunch or coffee breaks, and team meetings between them, their colleagues, and their manager. It also includes observations made during a follow-up meeting about the RCU's financial and performance-related targets where discussions about the BHC number were held. Taken together, these observations granted me access to explore how the BHC number is made and used, as well as its performative implications.

In contrast to the previous chapters, most of this chapter concerns the making of a number. Furthermore, in many of the situations that I am about to present, the BHC number is not immediately apparent. Rather, the making and subsequent use of the BHC number can be understood as a social drama. According to Rosen (1985), the concept of social drama can be given a more precise meaning as 'the processual unit through which power relations, symbolic action and their

interactions are played out, and through which social structure is made evident' (p. 31). Social structures are not made evident in the sense of being revealed as concrete entities. Rather, social structures are revealed as processes of symbolic power that are able to define social reality (cf. Kunda, 2006 p. 155 f.). Social reality and symbolic action are, in turn, unceasing processes where social dramas make up a particular unit that lends itself to be observed and analysed in social situations (Turner, 1974).

The rest of the chapter is divided into four parts. The first two parts focus on the making of the BHC number, while the last two parts examine how the BHC number is used (or not used) in everyday work. The first part, then, looks at the making of the BHC number and shows the difficulties faced by BHC agents when they try to compile the data needed to produce the BHC number. When agents are faced with such difficulties, a social drama unfolds. The second part shows how, when facing these obstacles – chiefly literal, but also metaphorical ones – the agents choose and pursue alternative courses of action in creative and imaginative ways. These actions can be seen as a form of resistance, but appearances may be deceiving. The third part shows how the BHC number engenders a mindset of competition and compliance work, as well as how it creates the evidential basis from which the numbers can be used as evidence. The fourth part shows how the BHC number lends itself to be used for impression management and as a tool for positioning oneself and others.

Background

While proper hygiene is an important feature of society and our everyday lives, the attention we pay to hygiene practices in our own lives, and to how healthcare actors comply with hygiene procedures, was accentuated in early 2020 when Sweden and the world was struck by the Covid-19 pandemic. Then, most of us were suddenly exposed to the threat of infection but also to a barrage of guidelines for proper handwashing, sanitising, social distancing, and the use of face masks. Arguably, in the years since the pandemic roamed the world, most of us have become familiar with an adherence to protective hygiene practices that were previously tied to the domain of healthcare work – like wearing face masks and compulsive use of hand sanitizer.

Proper hygiene is crucial for preventing the spread of healthcare-associated infections (HAIs). HAIs are a significant concern for healthcare organisations, individuals, and society at large. Since 2008, national surveys in Sweden have

shown that approximately 10 per cent of all patients who are hospitalised contract a HAI during their stay (Folkhälsomyndigheten, 2018). The costs associated with HAIs are significant, both in economic and humanitarian terms (Stone, 2009). In Sweden, around 65,000 patients fall prey to HAIs every year, with an average cost of 107,000 SEK per patient, which amounts to just under seven billion SEK per year (Socialstyrelsen, 2019). Numerous studies have suggested that HAIs can be prevented through simple infection-control procedures such as hand-washing and the use of hand sanitisers (Haque, Sartelli, McKimm, & Abu Bakar, 2018). In Sweden, approximately half of all HAIs are believed to be preventable (Socialstyrelsen, 2019).

In Sweden, the BHC measurements were first initiated in 2010 with the claimed purpose of assisting healthcare organisations in reducing the spread of HAIs (SKR, 2020b). The BHC measurement aims to reflect everyday healthcare work, or more specifically, how well members of the medical staff, who are in regular contact with patients, comply with the BHC rules. The BHC number can be said to have two principal functions: surveillance and action. That is, the number enables healthcare professionals to be evaluated based on their compliance with hygiene and clothing rules, and it enables decision-makers and public officials to compare and intervene in potential issues.

The BHC measurement is what is known as a "point prevalence survey" and works by quantifying and counting certain behaviours of healthcare professionals on what is essentially a binary dichotomous scale of compliance or non-compliance. The "measurement" is made somewhere – in this case, at the RCU – at a particular point in time – over the course of two weeks, twice a-year. The term measurement is placed in brackets because, despite being called a measurement, what BHC observers do is mark check-boxes based on their observations. Hence, the BHC observers do not measure compliance. Instead, they categorise the actions of other healthcare professionals – and occasionally themselves – and match these to a standardised BHC form.

The form used by the nurses to make the BHC observations require them to enter the following observations about those they observe (cf. table 3 below): (1) occupational category, (2) compliant use of hand sanitizer before, (3) compliant use of hand sanitizer after, (4) compliant use of gloves during risk of exposure to bodily fluids, (5) compliant use of disposable apron/protective coat, (6) compliant work clothes, (7) free from rings, wrist watches, bracelets, bandages, and support rails, (8) nails short and free of nail polish and artificial material, and (9) short hair or hair up. The observations are to be entered as either "yes", "no", or "not

relevant" – which counts as being correct (only observations about gloves and aprons can be entered as not relevant).

Table 3. BHC form (SKR, 2020a) my translation.

Observation	Occupational category	Compliant use of sanitizer before	Compliant use of sanitizer after	Compliant use of one-time apron or safety coat	Compliance to basic hygiene routines (all four steps)	Free of rings, watches, bracelets, bandages, and support rails	Short nails, free from nail polish, and artificial materials	Short hair, or hair up	Compliance to clothing rules (all four steps)	Compliance to basic hygiene routines and clothing rules (all eight steps)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

The BHC number is derived from the observations that BHC agents make by ticking check-boxes found in the BHC forms. As seen in the figure above, a full set of data should include ten observations. Once all observations have been recorded, the authorised BHC agent sends the output from the form to the Swedish Association of Local Authorities and Regions (SALAR). There, the observations are transformed from binary tick-boxes to numbers. The BHC number that is produced by SALAR is then made available as a set of percentages (0–100%). Zero means no compliance, while one hundred means full compliance. If any element of an observation is entered as non-compliant, the entire observation is deemed non-compliant. For example, a fully completed BHC form should include entries in all ten rows of the form. If one column is marked as 'no' (not compliant), the entire row is counted as non-compliant. That is, in terms of the main BHC number, the compliance rate drops to 90%. Each element in the form is also divvied up to facilitate a more detailed analysis of each observation. In these reports, observations of compliance that were made non-compliant for reasons just described are presented as 'compliant'. However, in terms of performance goals and financial incentives, it is the overarching BHC number that counts.

The BHC observations made at care units, such as the RCU, are turned into aggregated numbers at a hospital, municipal, regional, county, and national levels and are made publicly available by SALAR on their website (cf. SKR, 2020c). The numbers are predominantly presented in bar charts that enable comparisons

between different regions, and as line charts to show the disparities between different professional groups. The data are also made available to healthcare staff who can choose to employ a different or alternative way to present their results and the comparisons they wish to make. Having a perfect score of 100 per cent compliance with the BHC is one of several performance-related goals within the RCU.

By being publicly available, the BHC numbers enable hospital administrators and staff members, but also elected officials, journalists, and the public, to evaluate, compare, and judge the BHC compliance of those that have been observed. Sometimes these numbers and the stories attached to them gain media traction. As SALAR is an employer organisation, there is an inherent tension between SALAR and the various trade unions in the public sector. How the BHC number is represented in media often signifies how responsibility and blame are shifted, from managers and organisations to employees and professional groups. For example, due to what is measured and 'revealed' by the BHC number, it can be easy to interpret the results as an outcome of lazy and incompetent workers, rather than as the effects of a malfunctioning organisation and poor management practices (e.g. Grönvik, 2020; Klingberg-Hjort, 2020).

Three aspects of the BHC can be distinguished. First, BHC compliance represents the real actions of healthcare professionals in complying (or not) with hygiene and clothing rules, such as hand washing, use of sanitiser, and protective equipment, such as plastic gloves, aprons, or face masks. Second, BHC observations encompass the actions performed by BHC agents in 'making' the BHC number. That is, the activities the agents perform to see and report BHC compliance. Third, the BHC numbers denote the numerical output, or result, of the observations made by the BHC agents and serve as a representation of compliance with the BHC. These distinctions are important because I am not trying to discuss the value of proper hygiene, which I think is uncontested as an important aspect of everyday life and healthcare work. What I will discuss is the actions associated with measuring hygiene compliance, and what the numbers that are produced do, and what these numbers can be used for. For the empirical investigation that is about to embark, it is worth seeing these three aspects of the BHC as decoupled from one another.

Social Drama in the Making of the BHC Number

At the RCU, the BHC number is difficult to make, both on a practical and emotional level. The immediate scenery, as will be shown momentarily, makes it very difficult for the BHC agents to perform their observations, because almost all care-related work occurs behind closed doors with frosted glass. The broader implications of this scene are worth pointing out. Healthcare is an environment where sensitive information, confidentiality, and secrecy are demanded and safeguarded by professional norms, administrative systems, and regulations. The immediate scenery, with work taking place behind closed doors and frosted glass, serves to reinforce the notion of sensitivity, confidentiality, and secrecy. The design of the RCU can be interpreted as a physical manifestation of these aspects on a symbolic and practical level. For example, frosted glass panels are a practical means of confidentiality by effectively making it impossible to see through them. They are also symbolic displays of confidentiality by signalling that no one should look inside.

Notwithstanding the clear-cut numbers that emerge from the BHC observations, the making of the BHC numbers is an intricate social accomplishment by the BHC agents. What the agents do in 'making' the BHC numbers is to 'collect' measurables. Involved in the collection of measurables are a set of actions and activities performed by the agents. When they collect measurables, the agents need to see something. For them to be able to see, they need to act in certain ways. How they act depends on the immediate scenery that they are in, their social roles, and what they are trying to see. To see something requires the agents to see that something as something – that is, on their ability to categorise it. In doing so, the agents carve out tiny slivers of the social world and turn these slivers into measurables. Then, the agents report these measurables to SALAR. Once there, the measurables undergo another transformation, as they are turned into numbers. Next, I show the intricate ways in which the actions and activities of the BHC agents are performed at the RCU.

Scenery and the act of seeing

The scene – the physical environment and the immediate and wider context in which the BHC observations are made – puts significant constraints on how the BHC agents perform their observations. At the same time, the scene affords them opportunities for creative action and ways to resist some of the performative-

related implications associated with the BHC number. For the agents to overcome the obstacles erected by the scene, they need to adjust how they compile the data for the BHC forms. The agents need to employ their resourcefulness to overcome the barriers that – quite literally – block them from making direct and more causal observations. As the actions of the agents play out, the social drama of everyday healthcare work unfolds.

Next, Casey and Elliott – the agents who are tasked with making the BHC observations by filling out the BHC form – tell me how they perform the observations.

Casey (nurse): We have forms that we use when making these observations. We observe what our colleagues do and what they wear; if they are wearing the right clothes or not, if they are using alcohol (hand sanitiser) the right way. Using sanitiser the right way means that you should wash your hands several times when you meet with a patient. Before you shake the patient's hand, you should wash your hands with soap and water and then with sanitiser. Then, after shaking the patient's hand, you use sanitiser once more. After the meeting, and having shaken the patient's hand, you use sanitiser. If you use any equipment, any contact with the patient should be made only after you have used sanitiser. Then, after a patient meeting, all surfaces that have been, or could have been, exposed to bacteria should be wiped down with sanitiser. At this kind of care unit, observations such as these are tricky, really tricky. While Elliott and I can sometimes see through some of the doors to the examination rooms, most of the meetings we have here, involving patients, are performed behind closed doors.

To re-emphasise what Casey is saying here, the BHC observations, which seem easy to perform at first glance, are made 'tricky, really tricky' by the scene, since most patient meetings are performed behind closed doors. Unlike meetings that take place elsewhere in the building, say in the nurses' offices, the frosted glass and the closed doors make it challenging for the agents to see what is happening on the other side of the door.

Elliott (nurse): It is often possible to see if a colleague is using hand sanitiser after an appointment.

Casey (nurse): That is correct, but that person could also use sanitiser between two meetings, which would not be seen in such a case.

This brief conversation between the two agents suggests that, for them to adequately fill in the BHC form, they need to directly observe the consultation between their colleagues and their patients. What is thereby implied is that the meetings that are observed are not standardised in a way that facilitates simple inferences to be made by the agents.

As the conversation develops, it becomes clear that the BHC observations are not only challenging in practical terms but also emotionally taxing.

Me (researcher): Do you get extra time to conduct these observations?

Casey (nurse): No, or well, it is part of our job. But we are both working 'as usual' during this period. So, it is mostly a matter of finding some time every now and then to do these observations. We have two weeks to do ten observations, so it is not too much of a hassle. I usually try to perform my observations during one or maybe two days. But it can be a bit unpleasant to perform these observations sometimes. Or, what do you think, Elliott?

Elliott (nurse): Yes. They are very unpleasant to carry out. We, or at least I, have to lurk around the care unit to scout and survey what people are up to. You have to sneak around and look through the windows, the cracks and through doors that temporarily open, so that you can catch a glimpse of what is going on inside the room.

Both Elliott and Casey express feelings of unpleasantness in conducting the observations, with Elliott more so than Casey. One possible explanation for this could be that Elliott is much more junior in the nursing role compared to Casey and the rest of the nursing team. That is, compared to Casey, who is largely observing peers, and occasionally superiors – the medical doctors – Elliott only gets to observe superiors. The scenery and the immediate context in which the observations take place also engender feelings of unpleasantness. I felt quite uneasy about making the same observations as Casey and Elliott. Not only was it uncomfortable to sneak around the examination rooms and risk being 'caught' by any of the observed staff members. The act of sneaking around, like the three of us did, also felt unpleasant as patients and other staff members walked by and saw us crouching on the floor in an attempt to see what was happening behind closed

doors during what should be confidential meetings between a clinician and a patient. The making of the BHC number does not just entail acts of observing colleagues, but prompts the BHC agents to engage in activities that may break into spheres of professional discretion, personal privacy, and confidential face-to-face interaction.

Casey also mentions the need to find 'some time every now and then' to perform the BHC observations. It seems reasonable that some pragmaticism is called for when deciding when the observations should be performed. Yet, in doing so, the agents grant themselves significant leeway and agency to influence the results of their observations. For example, the visiting hours of medical doctors at the RCU are limited to a few hours per week. Consequently, it is quite possible to decide to conduct the observations during a time when no medical doctors will be present in the care unit. This can have a significant effect on the outcome of the BHC observations because, as Casey claims later in this chapter, it is primarily the doctors who fail to comply with the BHC rules. His claim is supported by publicly available BHC numbers, which show that medical doctors scored far lower than all other observed groups every year since the BHC measurement was first launched in 2010 (SKR, 2020c). In theory, the BHC agents can thereby choose to perform their observations at a time when they are either more or less likely to observe compliance with the BHC.

The scene alters the act. The immediate scenery of the RCU makes certain kinds of observations impossible, or at least highly unpractical. The closed doors and the frosted glass make it impossible for the agents to make direct observations and to casually observe what their colleagues are doing while they are examining patients. At the same time, from an outsider's perspective, it can certainly appear as if spheres of confidentiality are being broken when the BHC agents perform their observations. The scene does not only affect what actions the agents can take, but it also shapes the act itself by setting the limits for what can take place and by engendering a new set of alternative actions. In the next excerpt, Casey talks about the difficulties of conducting BHC observations.

Casey (nurse): These measurements are not well-suited for the RCU. The forms are generalised for all healthcare units. It is not optimal at all to perform observations like these when you are working behind closed doors.

Elliott is once again crouching outside of the room that Kendall (doctor) is in.

Elliott (nurse): It really is very difficult to see.

Elliott takes a few steps forward, with the head next to the door in an attempt to listen in on what they are talking about inside. Elliott turns to me and whispers…

Elliott (nurse): Some of the staff members talk loudly, and Kendall is among them.

Casey crouches outside the room that Kendall had previously been in. No one seems to be inside, so Casey opens the door and looks at the sink to see if it has been used. There is no water in the sink, but Casey seems to make the interpretation that this, in fact, does not matter, because Kendall, so he tells me, could still have used sanitiser which would not be revealed by the sink.

Casey (nurse): OK, that's that.

Me (researcher): That was easy (I quickly correct myself); that was quick.

Casey (nurse): Well, you can't see anything.

After a brief pause, we move to the doors that veil Kendall and Kendall's entourage, two medical students who are there to observe Kendall's work for educational purposes. We both squat down to catch a glimpse of what is going on inside – I can only make out feet and ankles. Casey, perhaps to explain to me the purpose of my actions, or to justify theirs, starts to talk.

Casey (nurse): It is sometimes possible to see if they are wearing gloves, but only if they are using the gurney. We are not running a high-risk operation here.

A noise is coming from the room; we back away. The door opens, and Kendall with the entourage exit. They cross the hallway and enter a room on the opposite side.

Me (researcher): Elliott, did you see anything?

Elliott (nurse): No. It is so incredibly difficult. I saw that they entered the other room – *Elliott squats outside the room Kendall and Kendall's entourage just entered* – I can't see anything.

There seems to be a view held by actors within large systems of quantification – such as by the BHC agents on the BHC measurement – that the comparisons enabled by large sets of numbers trump the accuracy of any single measurement. That is to say that within the politics of large numbers, it is more important that the numbers, and the data these numbers have been derived from, are comparable across time and space, rather than being perfectly accurate (cf. Desrosières, 1998). This, perhaps, might help us understand why, in Casey's view, despite the fact that BHC observations are neither 'suited' nor 'optimal' for work within the RCU, they are still performed. Because the numbers they produce tie into a larger system of measurement and comparison, within that system, the 'reality' of any individual claim can be reinforced by the accumulation of numbers. By

themselves, the ten observations conducted by the agents may seem less credible than an estimate based on guesswork or judgement. However, when integrated into the vast quantitative system and administrative body from which a final number emerges, they become clear cut numbers – facts, even.

The largely fabricated data that Elliott and Casey feel obliged to produce is justified by the claim that no real harm can come from them. As Casey says, 'we are not running a high-risk operation here'. This is a fair assessment, arguably. There is nothing which suggests that medical staff at the RCU are not, in general, adhering to the sentiments and rules of the BHC. Moreover, there is perhaps no immediate harm in making the BHC number, however flawed it may be. Yet, two things strike me as worth mentioning.

First, the hollowing of the symbolic and literal barriers that ward off the integrity of patients, and the confidentiality that patients might expect from their healthcare providers. For example, the RCU shares its space with a gynaecology unit and the unit for infectious disease, and they have a shared waiting area in the middle of the hallway, close to the RCU's examination rooms. These two care units are places where patients often come with sensitive, stigmatised, embarrassing, or even traumatic experiences. Those who visit a care unit, for whatever reason really, but especially when it concerns matters such as these, should never have to worry about their privacy or the confidential nature of their stay. As will be made clear later in this chapter, it is not that the BHC agents break into these spheres of confidentiality as they concern those within this sphere. Rather, on a symbolic level, the spheres risk being broken for those who observe the observers. That is, for those patients who are waiting for their turn to meet with a clinician who witness the actions of the BHC agents in their attempts to penetrate these spheres.

Second, as clear-cut numbers are produced, so too are the managerial systems that call for these numbers, re-produced. Thus, even in circumstances where the BHC observations cannot, realistically, be performed as intended, they are, as a matter of fact, 'made'. By the end of this chapter, I will return to this point, but in essence, it seems to me that this state of things produces a problematic situation. On the one hand, decisions are made by politicians and managers to measure, count, and calculate things that are, at least in this case, "impossible" to measure, count, and calculate. However, the fact that it, notwithstanding the difficulties, is "done" in the sense that a number is ultimately produced, means that even if actors do 'resist', they risk reproducing and justifying unnecessary and burdensome systems.

Seeing as an act of spying

The actions that Casey and Elliott perform to overcome the quite literal barriers set by the scene transform the act of observing. They alter the ways in which they do their observations, which, in turn, alters the act itself. I will now examine how this happens and the implications thereof. First, in an excerpt with Elliott, then Casey.

Elliott has heard a noise from one of the examination rooms and is crouching on the floor outside, trying to catch a glimpse of what is happening on the inside…

Elliott (nurse): It is really difficult; you can't see anything.

The doors have large glass panels that cover almost the entire door, the glass is frosted in a way that makes it impossible to see through. However, at the very bottom of the glass, about ankle-height, there is a section of glass, about 15-20 centimetres, that is non-frosted and see-through. I too hunker down next to Elliott to try to see through the glass, but I cannot see much, apart from the floor…

Elliott (nurse): It's super weird to spy like this. But I can see through here (*Elliott points at the section of glass that is unfrosted and see-through*). It really is super difficult. I could ask to attend the patient meetings together with whomever is doing it, or simply just enter the room, but that would also be super weird.

Me (researcher): These observations seem to be very difficult to make…

Elliott (nurse): Yes, they are really very difficult, if not impossible, to make (*laughs*). They are so difficult to make. I mean, how should we be able to see if they are washing their hands or using sanitisers (*asks rhetorically while gesticulating towards the closed doors where Elliott's colleagues are performing their examinations*).

By altering the language used, shifting from making observations to performing acts of 'spying', Elliott seems to imply that there has been a change in the type of act that they are performing. That is, the agents have transposed from an act of making observations to acts of spying.

The semantic meaning of the words 'to observe' and 'to spy' differs in important and significant ways. According to the Oxford Dictionary, the act of observing means to notice or perceive (something) and to register it as being significant; or watch (someone or something) carefully and attentively (cf. "observe" as a verb). The implication of making an observation is that the observed object is readily

available, and that the agency of the observer chiefly lies in adjusting, maintaining and sharpening his or her gaze to notice, perceive, or register what is deemed to be significant in that particular situation. For example, to register the observed person's professional role, to register his or her clothing, or to detect their use of hand sanitiser. Hence, the act of observing implies that the agents can act as they usually do, but by virtue of being BHC agents, slightly adjust their gaze to detect certain actions or features among those they observe. Spying, on the other hand, according to the Oxford Dictionary, means to observe (someone) furtively; to work for a government or other organisation by secretly obtaining information about enemies or competitors; to collect information about something to be used in deciding how to act.

There are at least two possible ways to examine the act of 'spying'. The most obvious way is connected to the limitations set by the scene and the actions that are taken by the agents to overcome these limitations. A more subtle understanding is that the agents are, as a matter of fact, gathering information about their colleagues and the hospital for an organisation, SALAR, which will use the data to evaluate, judge, and potentially reward them. The acts performed by Elliott and Casey not only facilitate the production of the BHC number but also serve to reinforce SALAR's position as a powerful actor within the Swedish healthcare system.

As evidenced by Elliott's statement, making the BHC number is not a simple matter for the agents. Notwithstanding it being 'weird' or even 'super weird' to be crouching and lurking in the corridors, it is also difficult to do so practically. Or, at least it is difficult, if not impossible, to perform many of the observations required by the BHC form in a meaningful way, that is, in a way that captures the processes of how their colleagues attend to their personal hygiene during patient encounters when they are behind doors. As Elliott points out, how would they know if their colleagues are using hand sanitiser or not while their colleagues are working behind closed doors?

It may seem self-evident that entering an examination room can feel 'weird', or even 'super weird'. At the same time, it is easy to imagine some ways in which the agents could counteract such discomfort. For example, they could inform their colleagues that they may drop in during their examination. A counterargument to this would be that the BHC observations should be covert. Such an argument is reasonable but flawed. The BHC observations occur during the same two weeks (twice each year). It is announced that the measurements will take place, but not the exact time when they will take place. The exact time means that the agents

should not communicate when, during these two weeks, they will conduct their observations.

Elliott's claim that it would be 'super weird' should not be accepted at face value. While it is easy to understand why entering a room during a colleague's examination may feel 'super weird', it is worth pointing out that interruptions such as this frequently occur at the RCU. Nurses and doctors regularly enter examination rooms to collect equipment or to ask questions. Moreover, observations of the everyday work of medical staff are a common feature of healthcare work and education, such as the students observing Kendall. An obvious example is, of course, my own presence at the RCU as an organisational researcher. It is also common for medical students to observe doctors when they perform their work, or for nursing students to observe the nurses. Therefore, the premise that merely entering a room where a colleague is performing an examination makes this act 'super weird' seem unconvincing. One possible explanation for why entering the room can be perceived as 'super weird' relates to aspects of status and social hierarchy within the RCU. Another explanation relates to the purpose behind making the observation.

The level of agency afforded to the agents varies depending on their professional role. As a specialist nurse, Casey belongs to the same profession as the majority of those he observes. Elliott, on the other hand, being considerably more junior and a non-specialist, is left solely to observe superiors. The weirdness that Elliott is expressing may therefore be interpreted as a form of 'social drama', in which power relations at the RCU are played out. This social drama is played out in the sense of engendering feelings of 'weirdness', acting as a cue that stops Elliott from entering the examination rooms, and thus from being able to adequately perform the BHC observations. The BHC observations can be understood as fashioning a social drama where social hierarchies, power relations, and compliance matter.

The purposes behind these different observations, or for entering an examination room, differ in significant ways. When staff members knock on the door and enter an occupied examination room, it is – as far as I can tell – to solve some work-related problem that has occurred. Purportedly, for both the observer and the observed, there is a difference between an observation for educational purposes and an observation to detect and assess compliance with a set of rules, such as the BHC. Moreover, the students who are allowed to make observations tend to belong to the same professional group as those they observe. They "belong" to this group as partial members that aspire to become full-fledged members of the group, or professional community. These observations can, therefore, often be

understood as part of a 'community of practice', and as an event where knowledge is 'transferred' or imparted from a senior member of the community to a junior or aspiring member.

When students are accepted into the examination rooms, they are presumably introduced as students and with the expressed purpose of learning. In my own experience, most of the struggles I encountered during my fieldwork occurred at the outset and related to a scepticism held by staff members about my motives, and a presumption that, as a student of business administration, I must be interested in advocating for ways to presumably make the organisation more efficient and effective. Thus, I would perhaps suggest the kind of changes and reforms that many healthcare workers frown upon and contest. I had to spend much time and effort into convincing my informants that I was a student interested in learning more about their work, rather than evaluating their actions or the organisation. Nonetheless, even in patient-nurse meetings I attended, the attending nurse would often refer to me as someone who was assessing their work and, therefore, of no concern for the patients.

Categories, assumptions, proxies, and trust

It would be easy to jump to the conclusion that the agents are only left with options that ultimately require them to "spy" on their colleagues. However, such a view seems to afford little agency for the actors who, in fact, can choose, and do choose, alternative ways to perform the BHC observations. In the upcoming excerpt, I explore some of the alternative ways in which the agents overcome the limitations set by the scene. These tactics can, in turn, be understood as a subtle form of resistance against the narrow agency afforded to the agents by the scene, their agential properties, and their professional roles. These tactics involve the use of *assumptions, proxies,* and *trust*.

The BHC number provides a means for managers and administrators to 'see', evaluate, and intervene in the actions of healthcare professionals. Evidently, based on the yearly BHC measurements and the prevalence of HAIs in healthcare, there is a lack of compliance with the BHC among healthcare professionals. There is therefore, so to speak, a well-founded rationale for managers, administrators, and professionals to intervene in actions that they see as being non-compliant with the BHC. In other words, there is arguably a sound degree of scepticism in relation to the professional integrity of the healthcare workers and their ability, or willingness, to comply with the BHC. At the same time, it is worth noting that

the BHC observations mainly measure individual behaviours and thus turn what could be systemic issues into individual shortcomings. For example, a doctor who is found wearing the wrong set of clothes – understood as a problematic behaviour – may also be understood as an effect of intensive time management strategies. Similarly, the failure of agency staff to comply with proper hand sanitisation could reflect tight work schedules or a lack of training. However, such issues are not what is measured by the BHC number. Nonetheless, if the underlying assumption of the BHC is understood as being one of scepticism, suspicion, or distrust, then there arises a strong tension between how the BHC number is *de facto* produced and the issue of a lack of trust that it sets out to resolve.

Compliance with the BHC is played out not only by the observed actors but also by the BHC agents who, faced the choice of either complying with 'spying' or resisting or refusing it. I think it is worthwhile to reflect a bit on acts of the BHC agents as a form of resistance – quite clearly, they are not refusing to conduct the observations. It is not obvious that the BHC agents are resisting making the BHC observations since they are, as a matter of fact, performing them. At the same time, the way they are performing the observations stray far from the ideal way of directly observing, or "spying" on their colleagues. Their alternative ways of making the BHC observations seem, instead, to take the form of pragmatic resistance, which is as a way for people to cope with situations they experience as irrational, disordered, and chaotic as a result of managerialism and official guidelines (McCabe, Ciuk, & Gilbert, 2020). Here, Casey and Elliott perform two observations at a rapid pace that reveal such alternative ways of acting.

Casey takes a few steps in my and Elinor's direction, and within a few seconds, Casey is back by the door to Elliott's office and starts to speak as if using a Dictaphone:

Casey (nurse): Doctor. Correct work clothes. Proper use of a disposable apron. Free of rings and watches. Two students. No nail-polish.

Elliott (nurse): Should we assume that he is using hand sanitisers?

Casey (nurse): Yes, do that. At best, we can observe afterwards if he does it.

Elliott suddenly gets up from the chair and walks over to where the examination rooms are and starts crouching outside one of the closed doors.

Elliott (nurse): Max (nurse) also has the correct clothes.

Elliott goes back into the office and jots down a few notes in the BHC form. Elliott writes "Nurse" and "Not relevant" on two places: Correct use of disposable gloves, and Proper use of a disposable apron".

Elliott (nurse): Max will use hand sanitiser, because Max is performing a PD-treatment and using hand sanitiser is part of the memo they use during these treatments (Elliott scribbles down "OK" on two places in the BHC form: Correct hand disinfection before, and Correct hand disinfection after).

The words 'assume', 'will', and 'because' are keywords that indicate how Casey and Elliott resolve the difficulties associated with making the BHC observations by establishing proxies. These imaginative techniques act as surrogates in lieu of what the agents can observe directly. The first technique the agents deploy is an assumption in place of being able to make a direct observation. When the agents are unable to determine if Kendall is using hand sanitiser, they employ an assumption.

The second technique is deployed by Elliott when making an observation of Max's work (and later, while "observing" Robin). Because Max is performing the examination behind closed doors, Elliott is unable to see whether Max is using hand sanitiser or not. But instead of assuming, Elliott employs a proxy – the work memo. Here, the words 'will' and 'because' are key. Essentially, this kind of proxy works by first defining the situation and, so to speak, ensuring that the logical rules that ensue are applicable. When Elliott defines the situation as Max doing PD, Elliott can infer a logical stipulation. That is, because Max is doing PD, Max is operating according to a particular work memo. Since the work memo states that hand sanitiser should be used regularly during PD, Elliott infers that Max is using hand sanitiser and makes a note of this in the BHC form.

In the excerpt below, a proxy is used once more. So too is the blunt alternative of simply asking, or being told, what happened by the observed staff member.

Elliott jots something down on the BHC form…

Elliott (nurse): It is for Max; I enter correct clothing in the form. Max is doing PD, so there's a lot of hand washing and sanitising, so no gloves are needed. I should check on Robin (another nurse) to see if Robin is using gloves.

Elliott leaves the room and crouches in front of the door, concealing Robin and the patient Robin is attending to. Elliott's eyes peek through the unfrosted glass, searching for a pair of gloves being worn by Robin – no gloves are spotted.

Elliott (nurse): I don't think Robin has the kind of patient that requires Robin to wear gloves… If one wears gloves or not depends on what form of examination or visit it is. I will ask Casey. If you are just performing a routine health check-up, then you're not having much or any contact with the patient; in such cases, gloves are not required.

Casey exits an examination room with hands visibly rubbing against one another – presumably with sanitiser. Casey walks towards Elliott and me, dictating audibly: "nurse"; "proper clothing"; "Hand sanitiser – before and after"; "hair up"; "no jewellery"; "proper use of apron".

Elliott (nurse): But how am I supposed to know this?

Casey (nurse): I am telling it to you.

Elliott, Casey, and I go over to Casey's room, where Robin is already present. Elliott asks them if they used hand sanitiser when they met their patients. Both Casey and Robin answer yes. Good, then I will fill in the form. Standing in the doorway, Elliott fills in the form, signing OK on the use of hand sanitiser – before and after.

Elliott concludes that Max is 'doing PD' and therefore is performing an act of hand washing, hand sanitiser use, and that gloves are not required. This can be understood as Elliott transforming the observation – or lack thereof – into a logical stipulation: if the observed person is 'doing PD', then steps 2–5 in the BHC form can be checked off as either correct or not relevant. By categorising the act performed by Max as 'doing PD', Elliott establishes a chain of logical causal inferences. As per the PD work memo, Elliott infers that Max is engaging in the correct use of hand washing and sanitising, steps 2 and 3 in the BHC form. If these steps are respected, there is no need for Max to wear gloves or an apron – thus, steps 4 and 5 of the BHC form can be ticked off as 'not relevant'. In other words, the categorising or defining of the situation enables Elliott to perform logical inferences that would seem to make it possible for Elliott to fill out the BHC form without directly observing Max's actions.

The tactics employed by Elliott raise a few concerns. An obvious concern is the risk of relying on proxies or inferences in place of direct observations. This is problematic because the observations are subsequently turned into numerical indicators, and these indicators are, in turn, transformed into aggregated numbers and, ostensibly, to statements of fact. In doing so, a form of circular logic is established by which rules, guidelines, or memos become evidence of the actions they aspire to instil within the organisation or elsewhere. It is clear to see, by analogy, that most people would refuse to accept that formal legislation is a sufficient basis for claiming that civilians or police officers comply with the law.

Another tactic used by the BHC agents is to simply ask the observed person about what took place behind closed doors and be told what happened. The most obvious example of this tactic, and how it relies on trust, is seen in the interaction between Elliott and Casey – and later, between the two and Robin. In their interaction, Casey exits an examination room and tells Elliott what to enter on the BHC form. When Elliott challenges Casey's claim and attempts to gain further justification by asking 'how am I supposed to know this?', Casey's reply is sharp and swift 'because I am telling it to you'.

These tactics – being told, making assumptions, or using proxies – are interesting from a broader and more analytical point of view because they all seem to rely on some form of trust. Assumptions draw on trust in people. The extent to which being told works as a tactic depends on the trust that the BHC agent assigns to the claim made by the observed person. Proxies, on the other hand, rely on trust in the formal structure that guides everyday work at the RCU – memos, routines, and standardised ways of working. This tactic can be thought of as a trust in bureaucratic structures and the capacity of these structures to accomplish what they set out to do.

Trust forms a subtle form of resistance available to, and used by, the BHC agents. The expressed purpose behind the BHC number is to reveal compliance with the BHC among staff. The underlying assumption of the BHC is that neither formal routines, guidelines, or memos, nor a professional ethos, can be trusted. Again, this is arguably a sound objective, as many measurements demonstrate that professionals do not comply with the BHC, and studies show that failing to do so is costly, both financially and in terms of human suffering. The BHC numbers indicate a managerial logic implying that, by measuring compliance, managers can spot non-compliant behaviours and intervene in the actions of staff members from a distance. The act of using trust to conduct the BHC observations can be seen as a subtle act of resistance by the BHC agents against the managerial logic that is imposed by the BHC number.

Competition, evidence, and compliance work

Many of the observations made by the agents rely on trust in people, processes, and structures. In a subsequent process, trust is transformed into evidence of compliance with the BHC rules. At its core, the acts performed by the BHC agents are made up of a series of events where they observe their colleagues and categorise them based on their professional roles, appearances, and behaviours, all

in order to enter what they see on the BHC form. The expressed purpose of the BHC number is to facilitate organisational action aimed at preventing the spread of HAIs. However, such a narrow conceptualisation of the BHC number may be too simplistic.

The BHC observations seem to carry a self-fulfilling prophecy; by performing the measurements, one not only gains knowledge about compliance with the BHC but it also supposedly entails improvement (cf. Furén-Thulin, 2020). A reversed logic suggests that by not measuring the BHC, care units, hospitals, and municipalities are not only left in a state of not knowing, but they can also be assumed to perform worse than those who do measure BHC compliance. This interpretation is supported by an official report that was released by the National Audit Office in 2014. The report concluded that while the agreements between the government and SALAR are voluntary for each region, opting out has financial and normative implications that are very difficult to circumvent for decision-makers and public officials (Riksrevisionen, 2014). Not only is there a financial incentive that has to be refuted, but decision-makers also have to make a persuasive case as to why they should not measure compliance with the BHC – a measurement that may seem inherently beneficial.

The purpose of assigning a BHC number within healthcare units, such as the RCU, seems to lie in how the number can be used. The principal use and performativity of the BHC number are that: (a) it actively creates the evidential basis for compliance with the BHC rules, which it then (b) authoritatively refers to, by virtue of appearing as a precise and objective number. Next, Casey reflects on what use they have for the BHC observations at the RCU.

Me (researcher): Do you have any use for these observations?

Casey (nurse): It is a good question… We find out if there are any deviations, and we get a percentage of these deviations. The goal is one-hundred per cent, but there are those who are misbehaving. It is the doctors who fail; they insist on wearing their wristwatches, wearing a cardigan, wearing their civilian pants. But that is up to the chief medical officer to take care of. They do not get the same education about hygiene as nurses. But it is not a big deal here. The work pace is slower here; it is much more difficult at the kidney ward; there the tempo is higher, and it's much easier to forget something. If you are in a rush, you can easily overlook something – "shit, I should have done this"; "damn, I should have had

gloves on", or "I should have taken them off"; "damn, I should have done this or I should have done that".

Me (researcher): Do you feel like the results from these observations affect you or your work?

Casey (nurse): One can feel a bit bad if one gets a bad result. At the same time, if one doctor has a wristwatch on, then the result is down to 90 per cent. We nurses have become much better at working with hygiene, but the doctors are still lagging behind in this area. But it would be interesting to see if the results have led to any changes being made. I have a feeling that they have not.

The answer, according to Casey, is that the results help them find out how well they are complying with the BHC guidelines. It is interesting that Casey points out that they 'find out if there are any deviations' and 'get a percentage of these deviations'. That they 'get a percentage' is interesting and provides a clue about the relative strength that a number – any number – can have over personal experience. Perhaps to 'get a percentage' can be better understood by probing the word "get". By sending the BHC form through a bureaucratic process, the observations are bestowed with bureaucratic rigour and legitimacy. When the BHC forms are transformed into percentages by SALAR in this process, they seem to acquire a forged sense of precision, accuracy, and objectivity (cf. Power, 2004). Thus, once the BHC observations take on a numerical form, they are transformed into legitimate evidence of the unit's compliance with the BHC rules. When the hospital 'gets' the numbers, these appear to be more robust and factful than they may actually be. Therefore, it becomes important to 'get' the percentages, rather than merely to create or produce the numbers internally.

While it is technically correct that they 'find out if there are any deviations', this seems somewhat arbitrary considering the limited sample size of ten observations and the largely fabricated nature of these numbers. As Casey points out, if someone fails on one part of each set of observations, the overall result drops down to ninety per cent. It therefore seems strange that a large bureaucratic body, such as SALAR, is required to transform the BHC observations into numbers. The claim that they 'find out' is likely best understood as being able to locate, or benchmark, the compliance rate of the RCU in relation to other care units or the BHC compliance rates of the hospital or region.

The BHC number is one of several key performance indicators used at the RCU. It is used by team members at the RCU to compare themselves against similar

care units. Next, Casey reflects on the BHC number and how it is connected to the wider domain of what Casey calls 'organised compliance work'. This kind of work seems to have two principal functions. First, it sets out to solve organisational or healthcare-related issues that are claimed to be connected to non-compliance (in this case, with the BHC rules). Second, the numbers that are generated through organised compliance work, such as the BHC number, can also be deployed publicly for hospital managers and public officials to be able to convey decisiveness and action.

Casey (nurse): Ever since the construction chaos that is taking place at the hospital started, there have been media reports about the hospital being overcrowded and patients having to stay in the corridors. This has led to more organised compliance work. The BHC is an example of this kind of organised compliance work. It is about what we should wear and how we should look. We are not allowed to combine private and professional clothing; no nail polish or jewellery on our hands or fingers; long hair should be up or worn under the region's hair covering. Hygiene routines are about bodily fluids, aprons, gloves, and face masks. There are variations among guidelines across care units. But if one tick-box is failed, then the entire observation is failed. Last time, we failed because one of the doctors wore personal trousers together with his work coat. That resulted in non-compliance. The goal is one hundred per cent compliance; this led to a score of ninety per cent. The idea behind the measurement is increased efficiency. The results (of the BHC) are brought up during APK meetings (a weekly meeting involving all nurses and their manager, Parker). There, the results are compared to other care units; it's a bit like a competition. There is not much happening as a result thereof, but there could be. The results are analysed and discussed, but it is only if there are 'systemic' or system-related issues that something can happen.

Along with its purported purpose of being a tool for healthcare organisations to prevent the spread of HAIs, the BHC number can also be used as a tool for managers and decision-makers to convey to the public the extent to which healthcare professionals are complying with the BHC rules. This can be inferred from Casey's remark that more 'organised compliance work' has been propelled

by media reports and that the BHC, as part of this work, is one of the tools available to hospital managers and public officials to calm media storms, such as those related to the construction work taking place at the hospital.

By making the RCU's compliance work visible and comparable to other care units, the BHC numbers can be understood as imposing a competitive element into the care unit. Once measurements are initiated at a care unit, hospital, or region, they are enrolled in a ranking system that encourages competition. A bad result on the BHC could place hospitals, regions, and care units into the limelight where they risk being named and shamed – similar to school and university rankings (cf. Elstad, 2009; Sauder & Espeland, 2009). The notion that the BHC numbers are thought of as 'being like a competition' suggests that nurses at the RCU should embrace the BHC number and strive for high compliance rates. However, such a competitive element may create tension for the BHC observers, who are tasked with filling out BHC forms in ways that should accurately reflect their workplace reality while also being subtly encouraged to produce 'good results'.

What constitutes 'good results' is far from being as obvious as it may seem at a first glance. Sure enough, there is a stated goal of one-hundred per cent compliance. The ways through which the BHC agents reach this goal suggest two forms of compliance. On the one hand, compliance with the BHC itself, or rather, with how compliance is represented through the BHC number. On the other hand, accomplishing this goal may suggest, contrary to acting as a form of resistance towards managerial logics, that the agents are complying with the professed value of conducting observations and getting a high score. However, under different circumstances, it could actually be that a seemingly 'bad' score (a low number) can be 'good'. Thus, what makes a number 'good' or 'bad' depends on how the number can be used and what function it serves in such usage. For example, just as a high score can be used to convey immaculate performance and compliance, a low number can be skilfully wielded by actors to portray others as problematic, in ways that can reinforce their own standing or that of their group. A low number might also be deployed in strategic attacks on management, where it could be claimed to represent substantial flaws in the organisation, or used to advocate for an increased budget.

Using the BHC number for the Positioning of Self and Others

The BHC number can be used to convey and establish a particular impression of oneself or other people. As suggested by the upcoming excerpts, the BHC number enables its wielders to allocate credit and blame and to construct narratives suggestive of a so-called anti-identity (cf. Alvesson & Sveningsson, 2011), that is, a deficient other. In this case, mainly agency nurses, and also doctors, – are presented as a counter-image to oneself. Consequently, an individual or group can position themselves as being more distinctive, superior, and valuable in comparison to the deficient other. Especially in something as practically ambiguous as demonstrating proper hygiene standards, clear cut numbers and the mobilisation of an anti-identity afforded by the BHC number become powerful tools for image management.

In the upcoming excerpt, Parker, who is the unit manager, describes working with BHC compliance in a follow-up meeting that I observed for the RCU's financial and performance targets. The meeting provides an arena for critique and blame, as well as for praise and self-positioning. Among those participating in the meeting are Ridley, director of specialised medicine; Devan, operations manager for specialised medicine; Sidney, area manager for renal care as well as Parker's immediate manager; and Taylor, a financial controller, who oversees the meeting. In the excerpt, Taylor has just gone through a series of PowerPoint slides about the RCU's performance during the past month. At the meeting, Parker is continuously asked to explain, justify, and sometimes elaborate on the numbers shown on the screen.

By the end of the meeting, Taylor turns to a new slide that contains the latest BHC number. The discussion had previously focused on an overreliance of agency staff. Now, the slide shows the RCU having a perfect score of one hundred per cent compliance with the BHC.

Parker (unit manager): I often say to them [the agency staff] "you should not enter a patient's room with your wristwatch on?" Sometimes I get a response, while other times I don't. I once saw one of them coming out of a room with a wristwatch on and saying goodbye to the patient. I sent her home there and then – she will not come back to us. Another time, one of them came in that morning with long nail extensions on her fingers. I told her to go back home and that she could come back if she got them

removed. Robin overheard her by the elevator complaining over the phone. But that is unacceptable. I tell the agency: "those people should not come back here".

By telling stories like these, Parker can accomplish at least three things. To the subordinates, Parker signals the importance of complying with the BHC rules. Conversely, Parker signals an attentiveness to detail towards the superiors – spotting the fingernails of an agency nurse and resolving the issue – when sending the agency nurse home. Parker also shows a firm commitment to quality – people who fail to meet the BHC standards 'should not come back'. Notwithstanding the trustworthiness of Parker's storytelling, these stories are made credible by the BHC number – a perfect BHC score allows Parker to be positioned in the ways described.

Throughout my fieldwork, I heard many stories such as these. Every time, they involved an agency nurse. Long fingernails, or nail extensions, are one out of several bodily attributes that the BHC measures and penalises. As the story goes, when the agency nurse fails to comply with the BHC rules, she is immediately sent home. Stories like these, along with claims such as the one made by Casey that it is 'the doctors that fail', indicate a hierarchal order in which blame goes upwards, towards the doctors, and punishment strikes downwards, towards the agency nurses.

Elliott (nurse): One time, there was an agency nurse here. She had been called in, but she was sent home by our manager, Parker, shortly after she arrived, because she had been wearing fingernail extensions. It was during one of our morning meetings; we were all sitting here around the kitchen table when Parker suddenly spotted the long fingernails of the agency nurse. Parker pointed at her nails and asked, "what is that?"

Me (researcher): What happened then?

Elliott (nurse): She was sent home; you are not allowed to work here with nails like that.

Robin (nurse): I remember that, or, at least, I think it was the same event. I was coming in late and met her in the elevator. She was really upset and was talking about it to someone on the phone. It seemed unprofessional to me.

Stories such as these suggest that the BHC numbers have implications for everyday work at the RCU. At the same time, it is worth pointing out that the underlying assumption seems to be that the regular staff members are without fault. The number shows a perfect score, while Parker's remark suggests that it is outsiders – agency staff – who may jeopardise the score. In both excerpts, there are several remarks that indicate boundaries between members and non-members, where the latter are portrayed as problematic and 'unprofessional'.

These stories not only allow Parker to self-present as a manager of action, but there is also a more subtle point to be made. Staffing and personnel budgeting are issues that are regularly discussed during these follow-up meetings and elsewhere. In these discussions, Parker frequently tries to increase the personnel budget to be able to recruit more regular staff members and be less reliant on agency staff. Thus, the BHC number enables a credible form of storytelling that allows managers to position themselves and others strategically. These stories can also be aligned with broader agendas, such as reducing the number of agency workers and increasing the number of regular staff members.

Summary

Evidently, despite the seemingly simple forms that the BHC agents are tasked with filling in, and the clear-cut numbers they produce as a result, producing the BHC number is far from simple. At the RCU, the presence of closed doors, frosted glass, and feelings of discomfort engendered by the setting and the spy-like circumstances in which the observations are carried out make the BHC number very difficult to generate. However, this chapter does not set out to critique the BHC number per se. In fact, it is perfectly possible that the BHC numbers could be generated by using 'direct observations' in other, including differently organised, care units. The arguments presented in this chapter are supposed to be sensitising. In other words, this chapter should be judged based on the extent to which it can inform and say something about numbers in general, and administrative numbers in particular.

The making of numbers can reveal social dramas where social status, power, opportunity, and limitations are exposed. Revealed are not only the decisions about what is to be counted, and what is not, but who should do the counting, and in what way. Moreover, what happens to the numbers after they have been generated can also point towards asymmetries of power and knowledge. For

example, actors like Casey and Elliott possess significant knowledge about the BHC number and its making, but they are powerless when it comes to its usage. As suggested by Casey, the BHC number could be very useful, but probably is not. At the same time, the numbers seem to be used by Casey's manager, Parker, in ways that serve Parker's interests. Due to the power held by the BHC agents to modify the way the observations are made, they are, in a sense, subverting the basis of knowledge from which power can be exerted by those in a position to do so. The irony, it seems, lies in the fact that those with the power to act based on the 'knowledge' engendered by the BHC number may be detached from the practical know-how involved in its making. In a sense, then, the BHC number represents a process not of the production of knowledge, but of a production and reproduction of what counts as knowledge, and what does not.

The BHC numbers establish a form of circular logic. At one point, Casey mentioned that what they get out of the BHC observations is a number. The implication being that the clear-cut numbers that emerge from their observations are more valuable than the observations themselves. The numbers, it seems, instil faith, or trust, in a system of quantification. That is, in a first step, a decision is made to quantify and measure BHC compliance. In a second step, this decision encounters the everyday realities of the BHC agents. However, despite the practical constraints they face in generating the BHC number, they ultimately perform the measurements and produce the numbers. Consequently, in the third step, numbers appear and prove that the measurement was, as a matter of fact, possible. Ironically, the pragmatic "resistance" exhibited by the BHC agents can thereby be understood as affording them some leeway but at the expense of being further caught up and entangled in a quantitative and administrative machinery. In other words, each successfully deployed set of measurements further reinforces a belief in the value of quantification and the possibility of managing by the numbers. Since the end result is a successful process of measuring, a not too far-fetched conclusion is that things can – and therefore should – be measured. Thus, a kind of circular feedback loop is established.

By looking at how the BHC number is made and used, a few reflections on the duality of structure can be made. The structural properties and associations of the BHC number tie into aspects, such as the limitations and possibilities of the physical setting, large bureaucratic bodies, quantitative systems, soft regulation, rankings, competitiveness, and key-performance indicators. The agency and actions of managers and BHC agents are suggestive of ways in which these actors can make use of such structures in informed and creative ways. An obvious

example is how the BHC agents, when faced with the physical constraints of the setting, make use of other structural entities, such as professional norms or work instructions, to overcome practical or emotional constraints. Perhaps more subtle is the social positioning made possible through the BHC number. For example, the anti-identities and self-serving narratives that are launched about failing doctors and agency staff that enable the claimant to establish oneself or others as superior by comparison. Moreover, within the public sector, even a failed score on the BHC can be mobilised in a plea for more resources and funding.

CHAPTER 9
HOW NUMBERS WORK

Introduction

At the start of this thesis, I argued that the strength of numbers within organisations had, at least in certain ways, been exaggerated and turned into a performative statement: numbers do things. In essence, I argued that several studies on numerical performativity have exposed an underlying logic akin to a form of social determinism that goes against the core tenets of performativity. Simply put, I argued that performativity should not be treated as an automatic effect but as a skilful social accomplishment. In the literature review that followed, I delved deeper into various schools of thought dedicated to different ways of seeing the numbers, what people use numbers for, what numbers have been claimed to do, and typical ways in which people have been found to react to numbers in organisations.

In many ways, what was suggested through these first two chapters was that the principal question to answer is not if numbers can be performative but how. Specifically, under what conditions can numbers be made performative? The subsequent theory chapter outlined a theoretical framework for a performativity of numbers in an organisational context. It was suggested that a 'dramaturgical perspective' would provide the most fruitful way of exploring the conditions needed for numerical performativity in organisational life by examining the seemingly minor and trivial things that people do to make numbers performative. At the same time, as I pointed out in chapter two, there are many good reasons for thinking of numbers as powerful entities within the social realms they roam. Yet, I suspect that an issue with such a view stems less from what we see and more from the position from which we are looking. What may seem unyielding and stable from a distance may appear much looser and dynamic upon closer inspection. In line with this idea, the fourth chapter outlined an ethnographic research approach focused on a detailed analysis of everyday work at the RCU.

This analysis was extended and developed in chapter five, where the social milieu, work environment, and professional practices at the RCU were described and examined. In the three analytical chapters (6–8) that followed, the GFR number, the PD goal, and the BHC number were all carefully analysed with a focus on what these numbers seemed to accomplish in social situations, and how various social actors related to the numbers and made use of them. This chapter goes further in analysing these three numbers by delving deeper into the social processes that were shared between these numbers, along with the conditions that made their performativity possible.

The following discussion is situated between studies on the performativity of numbers (e.g. Espeland & Stevens, 2008; Essen & Oborn, 2017; Fauré et al., 2010; Vollmer, 2007) and numerical reactivity (e.g. Boedker et al., 2020; Dorn, 2019; Espeland & Sauder, 2007; Rahman, 2021; Slager & Gond, 2022). Next, I launch an in-depth analysis on how numbers work in everyday organisational life. In doing so, I discuss how numbers work by establishing a social force that can propel people, situations, or actions in a particular direction or position (cf. Boedker et al., 2020). I refer to these aspects of how numbers work as *performance prompters,* which are meant to address the question of what numbers do. I argue that numbers generate a kind of social force that can encourage or discourage, enable or disable, reveal or obscure various ways for people to behave and act in social situations. In essence, what prompters do, ultimately, is that they prompt performances, meaning that actors use or relate to numbers and the force they engender by putting on performances aimed at influencing an audience. These performances address the question of what people do with numbers. Although numbers prompt actors to put on performances, without the success of such performances, the social force that is propelled by the prompters will fail to realise their performative potential or do so only partially.

The second part of the chapters extends and develops the state of the art on reactivity by arguing for a distinction between different kinds of alterations caused by how people react to the numbers, proposing a matrix for how either, or both, the number or the actors can be altered, or unaltered, by each other. The main contribution in this part lies in what I propose as four novel ways to consider the reciprocal interplay between people and numbers, namely by describing the processes of *ignoration*, *manipulation*, *transformation,* and *metamorphosis*. What I am suggesting is not only different ways for people to react to numbers or for the numbers to be altered by how people react to them. I am also showing how a performativity of numbers is far from a clear-cut process by which the social force

of a number makes actors put on performances that, if successful, achieve a desired performative effect. Instead, each reaction can shape both the actor and the number in a constant flow of changes and iterations that alter how actors make sense of, relate to, and make use of the numbers.

Performativity

Numbers prompt performances. People may use numbers to stage various kinds of performances. Scholars have highlighted that numbers enable individuals to define people and situations (Hacking, 1986), to persuade others (Carruthers & Espeland, 1991), to game the numbers in attempts to manipulate scores and results in their favour (Bevan & Hood, 2006), or to decouple from them in ways that make them appear as compliant with administrative or rule-based systems (Espeland & Sauder, 2007). Here, I take this line of reasoning one step further by suggesting that numbers prompt performances. Numbers do not merely function as a kind of smorgasbord from which actors may pick, choose, and wield them as they please. On the contrary, inasmuch as it may be possible to speak of a performativity of numbers more broadly, the numbers act by confining, or extending, the agential options that are available to the actors. In putting on such performances, agents may reclaim and extend their agential leeway (cf. Michaud, 2014). It may be helpful to see numbers as generating a kind of social force that has to go somewhere. Such a metaphorical view suggests that the numbers prompt people to act and react – to perform. These actions and reactions are what I mean by performances. From this point of view, a performance can also be understood as a way for actors to dramatise their actions in their attempts to communicate and convey a particular way of understanding something to someone.

Numbers engender a particular kind of social *force* that casts their audience in a particular direction or position (cf. Boedker et al., 2020). Metaphorically speaking, the performers in this case are the numbers and the audience are the people who are audience to them. This perspective is, however, lacking in at least two ways. First, numbers do not have a will or agency of their own, nor do they have a way of appearing by themselves. In other words, numbers neither appear out of thin air, nor can they mobilise an agenda of their own. Rather, numbers must be talked, thought, written, or otherwise mobilised into existence by someone or something, such as by a person, algorithm, or system. The point of this, which may seem obvious, is that numbers always enter social worlds with

baggage – such as the intentions of their makers, quantitative rules, and conventions, as well as the networks of meaning and webs of significance of the immediate and wider context in which they are forged and wielded. Such baggage surely affects how the number can influence its audience, and how actors are able to use the number in their performances. Second, numbers cannot perform in the ways that people do, such as by making facial expressions, bodily gestures, tonal shifts, adopting social roles, and so on (cf. Goffman, 1959). Numbers are different and so they do something else. Numbers do not put on performances; they prompt performances.

Numbers are embedded in the processes that make up our everyday life activities and accomplishments. They can engender, sustain, distort, or dispel entirely new and alternative social worlds. However, numbers need to be thought out, fashioned and formed, distributed, read, heard, and made sense of. Rather than being crystallised as perfect vessels for distinct meanings, numbers are always in a state of becoming. They are always being produced, performed, and realised. The essential question to ask is, therefore, not whether numbers are accurate, but what they are accomplishing in people's lives. My main argument here is that numbers engender a particular kind of force that propels their audiences in a direction or position from which that actor will have to act, or through which their actions are assigned meaning. At the end of the day, however, it is human beings who interpret, act, and put on these performances. But numbers are crucial for understanding how and why certain performances are organised and successful, while others are not. In principle, the force propelled by the prompters can steer people into widely different directions.

Next, I discuss how the GFR, BHC, and PD numbers acted as prompters for *interventions*, an *enterprising spirit,* and *accountability.* In turn, these prompt actors to put on performances of *persuasion, conviction*, and *defining the situation*.

The GFR number as prompting interventions and performances of persuasion

The GFR number *intervened* in the lives of people by casting them into the role of CKD patients who found themselves in renal care – or for those who the GFR number deemed to need renal care, but for whatever reason decided to reject treatment. The GFR number enables medical professionals to identify and sort patients. That is, patients could be found using 'simple' tests that usually only require a sample of blood or urine. Of course, not all people can be tested for

CKD, which was evidenced by the claim made by Alex (medical doctor), who stated that about one in every five patients drop in at the hospital 'like a bolt of lightning on a clear blue sky'. The four out of five patients who were found were identified using simple and cost-effective testing techniques. Those who were determined to be eligible for such tests were, in principle, individuals who suffered from other health conditions known to correlate with CKD, such as diabetes, high blood pressure, and obesity. Testing is important because if CKD is identified early, that is, while the patient still has a relatively high GFR value, it can sometimes be possible to avoid dialysis altogether.

The GFR number did not intervene by itself. Instead, it needed to be assigned by a medical professional to a patient. Such a statement may seem arbitrary, but it is important to remember that the GFR number is situated within the confines of a vast healthcare system, which is aided by hospital buildings, administrative systems, dress codes, medical norms, and a professional language, all of which infuse significance and authority onto the number. Moreover, it is healthcare professionals, lab technicians, and administrators who produce the GFR number, relate to it, and make use of it. The essential use of the GFR was for it to be assigned to a patient to diagnose CKD, to persuade the patient about his or her illness, and to keep the patient informed about how the illness was progressing. In other words, the GFR number "created" CKD patients and prompted acts to intervene in their lives by medical professionals and their patients.

How did the GFR number drive interventions? The GFR number actually shares many similarities with how Cooren (2004 p. 377) uses the example of a gun to show how action has no origin. The GFR number can be analogously understood in a manner like being in possession of a gun. The gun does not fire by itself, nor can a person fire a gun without having one. That is to say that having a gun makes shooting a gun possible. The GFR number did not intervene on its own, but it made a crucial difference for medical professionals to be able to intervene in people's lives. The relative ease with which the GFR number could be produced made broader screening processes available to healthcare professionals compared to if more difficult, expensive, and time-consuming tests would have to be used. This meant that more individuals could be tested for CKD and, in effect, that more people could be identified, diagnosed, and treated for it. Because the GFR number is relatively cheap and easy to produce, and because of the financial costs and human suffering that can be avoided by using it to identify as many CKD patients as possible, as early as possible, there is a strong incentive for the healthcare system to use it. That is how the GFR number prompted interventions.

What does it mean to intervene? Here, a fruitful analogy can be drawn to the play *Pygmalion* by George Bernard Shaw. In the play, Henry Higgins, an English teacher, intervenes in the life of Eliza Doolittle, who is a cockney flower girl, ostensibly by turning her into an English lady by teaching her how to speak cultivated English. However, despite his intervention in her life, she does not become a lady, but she also cannot return to her previous life as a cockney flower girl. Ultimately, Pygmalion is a story about the cost of meddling in someone else's life (cf. Tobias, 1993). In principle, the GFR number intervenes in the lives of patients in a similar manner. Once a person has been assigned a GFR number, he or she can no longer escape either the bliss or the burdens associated with the awareness of having an illness that is chronic and progressively worsening. It is worth noting that even an intervention of this kind, which may seem self-evidently good, may entail various psychological and social costs for the person whose life is being intervened. However, although the GFR number prompts interventions, it cannot shoulder the responsibility that follows from such an act. In principle, only two actors can take such responsibility – the healthcare system and the patient. Next, I will address how such responsibility is negotiated.

The GFR number enabled healthcare professionals to inform their patients about their kidney function, while also allowing the patient to interpret and assess his or her everyday activities based on this measure. The nurses at the RCU put on performances aimed at persuading their patients that they were, in fact, seriously ill despite typically not experiencing any noticeable symptoms of CKD. In other words, the GFR number lent itself to the nurses as a solution to what was referred to as being 'a huge pedagogical problem' in renal care. Using the GFR number, the nurses displayed two principal performances as part of a broader persuasion attempt. These performances were *taken-for-grantedness* and *naturalisation.*

The performance of taken-for-grantedness was of major importance in understanding the significance and authority that was ascribed to the GFR number, and its effectiveness as a means of persuasion. There is no one perfect way to measure kidney function, as even the most accurate, expensive, and difficult ways to do so are contested. It is, therefore, crucial for the success of each persuasion attempt that any doubts regarding the veracity or accuracy of the GFR number be cast aside and debated backstage, if at all, so that the number used in frontstage performances can be made to appear authoritative, comprehensible, and reliable (cf. Porter, 2012). In other words, the GFR number had to be performed in a way that made it appear as a self-evident, natural, and largely

taken-for-granted aspect of renal care and patients' way of relating to their own body.

Performances such as these were critical for establishing a foundation of trust in the GFR number and for dispelling any controversy and suspicion that could otherwise arise from patients questioning or challenging the number. In front of their patients, the nurses frequently presented the GFR number in ways that only alluded to it, and in ways that made it seem as if the nurses had direct insight into the patients' kidney function. These subtle performances were crucial for establishing a taken-for-granted and naturalised conception of the GFR number as an immediate reflection of kidney function, rather than a contested measurement or estimation. The GFR number was performed in ways that made it appear as a window providing direct access to the patients' kidney function.

The nurses also used two performances to naturalise the GFR number: they established a *trajectory* and issued *evaluations*. In principle, both these performances relied on successfully establishing the GFR number as a natural, taken-for-granted, and matter-of-fact aspect of the development as a patient in renal care. That is, if the GFR number was accepted, the trajectory of chronic and progressive decline followed naturally. Similarly, if the GFR number was accepted by the patient, this enabled both the patient and the nurses to issue evaluations of the patients' everyday actions, which could be substantiated by the GFR. The performance of establishing a trajectory was relatively straightforward and was essentially about convincing the patient that dialysis would be necessary at a certain stage of the illness or around a certain GFR value. Such a performance was about establishing a sense of urgency necessary for getting patients actively involved in their own treatment. The second performance of issuing evaluations relied on having established an acceptance of the GFR number and its trajectory. By establishing the GFR number as a window into the patients' kidney function and its progressive decline as an unavoidable fact, nurses were afforded authoritative ways to issue meaningful evaluations to their audience – the patient – who, in turn, could evaluate his or her own actions using the number.

The PD goal as prompting an enterprising spirit and performances of conviction

The PD goal prompted an *enterprising spirit*. It was intertwined with the GFR number, although unlike the GFR number, which was salient in meetings between medical professionals and their patients, the PD goal played a more subtle

yet significant role for both patients and medical staff. At a basic level, the PD goal was about encouraging the nurses to convince and persuade their patients to choose PD, rather than HD. This partly explains why the nurses preached the benefits of PD, along with the menacing aspects of HD to their patients. However, the nurses may also have done so because they believed this to be in their patient's best interest. At a deeper level, seen as a prompter for an enterprising spirit, the PD goal was not simply about getting more patients into PD. This is because the choice of treatment is ultimately a medical decision. However, PD is not just different from HD in the sense that the former is gentler, and the latter is harsher. It requires a lot more work from the healthcare professionals, and perhaps even more so from their patients. In other words, PD requires a particular kind of patient that embraces and adopts an enterprising spirit. The essence of the PD goal lay in cultivating a new and particular way for the patients to see themselves, their capabilities, and their responsibilities – they should become 'good patients'. For this to happen, the nurses also needed to embrace the enterprising spirit required to persuade their patients in a convincing manner.

The PD goal prompted an enterprising spirit that led the nurses to 'overperform'. This was because it engendered a form of 'systematically distorted communication' (Habermas, 1984), which impeded the patients' ability to engage in real and substantial personal discoveries about themselves and their treatment options. Thus, they were less able to explore all the options available to them and understand how these options related to their individual circumstances and unique characters. Essentially, the PD goal conjured up a story about good and bad outcomes for patients and nurses alike. For nurses, failure, or inability to achieve the goal was proposed as potentially resulting in another dialysis crisis – which ought to be avoided at almost any cost. It was, therefore, not too surprising that the nurses were overperforming rather than underperforming. For patients, HD was presented using a similar logic, whereby it was described as a harsh treatment that should be avoided if possible. Hence, the PD goal prompted particular and narrow notions about the options that were available to both nurses and patients at the RCU. An enterprising spirit emerged as the outcome of a process of systematically distorted communication, where adopting such a spirit could be perceived as the only valid and reasonable alternative for avoiding worse outcomes.

While the PD goal provoked or impeded certain structures of meaning, it was in everyday situations that people consciously or unconsciously could embrace,

refuse, or ignore the pathways laid out by the number. In other words, the PD goal needed to be performed. It was performed by actors who put on performances of *conviction*. As a performance, conviction aimed to establish an understanding among the audience about the authenticity of the performers' motives and the legitimacy of the message being conveyed. In principle, a successful performance would result in trust and acceptance among the audience, whereas a failed performance would be met with distrust and seen as fake or manipulative. Performers of conviction comprised two groups of staff: the managers who set and evaluated the goal and the nurses who accomplished it. The target audience for the managers were the nurses who, in turn, aimed to influence their patients. The structure of these performances shared many similarities with speech acts that Deetz (1992 p. 187 ff.) called *legitimization*, *matters of fact*, and *discursive closure*.

For medical professionals, the need to legitimise PD stemmed from the shift in labour it engendered, and from going against the well-trodden path that was HD. In terms of labour, PD requires less labour compared to HD, measured by FTEs (full-time equivalents), but it requires a labour intensification for certain groups such as medical doctors and PD nurses. PD achieves this by *de facto* outsourcing labour from the hospital to the patient, who, according to a few nurses, were spoiled by the amount of support they received and could demand. For patients and decision-makers, PD also risked being seen as something 'new and strange'. Because of these aspects, PD needed to be legitimised at various stages, such as to the hospital board of directors who green-lit the treatment, to the medical professionals who needed to embrace the work intensification it involved, and to the patients who had to assume much of the labour required for PD.

Performances of legitimisation consisted of three claims that either targeted notable decision-makers and medical professionals, or those aimed at the patients. The first claim, to legitimise PD, was made by seeing PD through an alternative quality indicator. Specifically, a process measure (FTE required per patient), which yielded a superior result for PD compared to HD (which is the superior treatment if a result target were to be used). The second claim established a certain ratio of PD as a performance target for the RCU. The third claim involved a discursive shift, where the effect or potency of each treatment form was redefined as gentle (less effective) compared to harsh (more effective). Taken together, these acts made PD appear as the legitimate and superior option.

The next part of the performance was to mobilise the necessity and benefits of PD as a matter of facts. PD was often claimed to be a necessity for avoiding, alleviating, or even solving the so-called dialysis crisis. In effect, achieving the PD

goal was frequently stated as the only valid and legitimate alternative available for doing so. In fact, the RCU's success with the PD goal was explained by Casey (nurse) as having been achieved 'out of necessity', rather than by choice. Such necessity stemmed from the dialysis crisis, which meant that there had been an increased number of patients diagnosed with CKD and in need of dialysis combined with a lack of trained specialised nurses able to perform HD treatments. However, in front of their patients, the nurses would present both HD and PD as options and claim the latter to be the superior and universally preferred option.

Performances of conviction were needed because patients might otherwise have been reluctant to choose PD if the treatment was somehow understood as being inferior but selected out of necessity. Claims about the superiority of PD, rather than its necessity, therefore needed to be performed. A second act of the performance was put on by stating that PD led to a statistically higher quality of life. However, the notion of a statistically higher quality of life is ambiguous for at least two reasons. First, it was not mentioned how much of a difference there was between PD and HD, so in theory it could be only a minor difference. Second, a statistically higher result is based on an average, which can mean that there may be significant outliers at both ends of the spectrum. Nonetheless, both the necessity and superiority of PD were performed in ways that established them as indisputable facts.

Discursive closure was performed by the managers through acts of *self-disqualification* and by nurses through acts of *pacification* (terms borrowed from Deetz, 1992). For example, the managers, Parker and Sidney, mobilised the importance of the PD goal in preventing a dialysis crisis. However, they disqualified themselves as capable of finding alternative ways to achieve the goal by claiming that 'the politicians decide' and 'so are the rules of the game'. Similarly, when the nurses urged the managers to consider salary increases or recruitment needs, these claims were rejected by stating that the money they had been assigned could not be used for salaries and that hiring additional staff was impossible. The nurses, on the other hand, used tactics to suppress exploration of the negative aspects of PD and the potential benefits of HD. When patients embarked on a path towards exploration or tried to pursue an alternative understanding of their treatment options, these were swiftly blocked or disqualified by the nurses.

Taken together, these three acts structured the overall performance of conviction. The subtle difference generated by the performance of conviction is that the chain of underpinning logic could be reversed. That is, PD was not considered the best

option because it was the only option; rather, it was deemed the only option because it was the best option. At a deeper level, the real performance of the PD goal was offsetting any alternative conceptions for reaching the PD goal and for solving the dialysis crisis. This included rejecting the work intensification associated with PD, refusing to allocate resources for recruitment or salary increases, and to disregarding the demands of specialised nurses who may otherwise be willing to take up a position as a HD or PD nurse.

The BHC number as prompting accountability and performances to define the situation

In principle, the BHC number was about holding healthcare organisations accountable for the actions of medical professionals who were in close contact with patients in their daily work. As a prompter for *accountability*, the principal question regarding the BHC number was what sort of deeper significance it held within the social setting where its role was played out. I suggest that an answer pertaining to the significance of the BHC number should be sought on a deeper level, because at a basic level, it is all too easy to simply dismiss it as garbage. Put differently, as far as accuracy was concerned, the BHC number did not offer much more insight into the everyday work practices at the RCU than mere guesswork or speculation would. So why was it treated as an authoritative and legitimate account for seeing and understanding a certain slice of organisational reality? And what did the number accomplish on a deeper level?

As a prompter for accountability, the BHC number accomplished at least two things. First, it created an evidential basis that facilitated the articulation of 'facts'. This evidential basis and a culture of performance were solidified by the BHC number. For example, the BHC number enabled actors at the RCU to 'find out' if there were any deviations and to compare their results against other care units. Second, the BHC number enabled evaluation, ranking, and judgement, as suggested by Casey's claim that 'it is like a competition'. The number provided a seemingly legitimate and authoritative account from which actors could assume or assign accountability.

The BHC number operates as a political number. At the hospital, the number cultivated a particular notion of reality and accountability that obscured alternative viewpoints. It did this by establishing what counted, when it was counted, who should do the counting, and who was authorised to use the number (cf. Alonso & Starr, 1987). The BHC number perpetuated the notion that

compliance with the BHC was ultimately the employee's responsibility. In other words, it assumed and assigned responsibility to individual actors and groups of medical professionals. Ostensibly, it was the actions of the medical staff that were observed, measured, compared, and judged. However, one could imagine a reverse ordering, where staff members observe the ways in which managers and administrators impede or fail to facilitate compliance with the BHC. This could include issuing overly strict time schedules, failing to provide hygiene supplies, offering inadequate training, and so forth. Seen this way, the BHC number prompted a particular view of accountability in terms of who was held accountable for what and to whom. The BHC number thereby obscured alternative forms of accountability and perpetuated the idea that measurement and management were important for achieving results and for what counted as performance.

The performance at work using the BHC number was about *defining the situation*. A defined situation is an answer to the question posed by Goffman (1974) about "what is it that's going on here?" (p. 8). Going forward, this question is divided into three more questions, *what is what? who did what? and what happened?* Each of these questions can be answered in an affirmative or negative way (cf. table 4 below). At its core, the BHC number was ultimately about categorisation, inclusion, and exclusion, as well as affirmation and negation. It was performed as 'factual' claims about what was what, who did what, and about what happened in a series of situations and events.

Table 4. What is going on here?

Question	Affirmative	Negative
What is what?	This is that (inclusion)	That isn't this (exclusion)
Who did what?	We/I/They did this	We/I/They didn't do that
What happned?	This happned	That didn't happen

The most fundamental performance made possible by the BHC number was the definition of 'what is what?'. In other words, it was about seeing, noting, and claiming something as something, thereby answering the question of 'what is what?' At a basic level, the BHC number, or rather the BHC form, prompted the agents to see and define people, situations, and actions in a particular way. One of the principal tasks of the agents was to define everyday actions in terms of the categories of available actions and professional roles as determined by the BHC form. At a deeper level, the definition of the situation was framed in a positive and affirmative way by default. The questions that comprised the BHC form were phrased in a closed manner, such as by asking if gloves or facemasks were worn,

hands washed, and sanitiser used. The implication of this way of producing the BHC number was that all actions that were not defined, however dangerous or unsafe they might have been, could be excluded and therefore not counted. The BHC enabled actors to define what constituted proper hygiene and to conveniently ignore other aspects at their discretion through negation and exclusion.

The BHC number was used in performances that conveyed a definition of the situation and to answer the question, 'who is doing what?' Through the BHC number, seemingly legitimate claims about what one group of actors did, and what another group of actors did not do could be made. For example, when Casey (nurse) claimed that 'it is the doctors who fail', this claim could be substantiated and legitimised through the aggregated result of the BHC numbers, which showed that it was the doctors who failed at the BHC more frequently than any other group of medical professionals (cf. SKR, 2020c). The BHC number enabled Parker, the unit manager, to make credible and convincing claims about being a diligent manager, by alluding to a hands-on-approach towards the agency nurses, and by implication, that a good score was closely tied to Parker's actions as a manager. However, the BHC number was about more than assigning praise or blame. For the nurses, the BHC number allowed them to make credible claims about their work output being of a high-quality. That is, the BHC number provided them with an ostensibly clear-cut number that defined their actions in terms of BHC compliance, and the actions of others, such as the agency nurses and the doctors, as inferior.

The BHC number provided an authoritative answer to the question, 'what is happening here?' In a social world where 'evidence-based practices' rule supreme, it is of great importance to be able to say 'we know' rather than 'we think' (cf. Johannessen, 2019). Managers and nurses put the BHC number through performances that defined what was happening as either individual shortcomings or systemic issues seen through the aggregated results. For example, scores of ninety per cent compliance at a local level could frequently be dismissed as a result of minor individual shortcomings. However, these same shortcomings were also frequently magnified and defined as systemic, such as implying that it is the doctors or agency nurses who fail to comply with the BHC rules. Nonetheless, such a definition of the situation is only one out of several possible ways to define the situation. The doctors who fail to comply with the BHC rules may do so, not due to a disregard for the rules, but because of conflicting demands imposed on them by the way healthcare organisations are run. For example, many doctors at

the RCU perform work at many different care units and hospital areas, where they may be subjected to different and conflicting clothing requirements. Similarly, the agency nurses, who wear long fingernails, might be called in to work at very short notice. Their presumed disregard for the BHC could be seen less as an act of unprofessionalism and more as a coping mechanism for managing the uncertain demands and expectations inherent in agency work. In other words, the BHC number defines the situation as one in which individual shortcomings are magnified and turned into systemic issues, rather than seeing them as consequences and manifestations of systemic issues. Issues such as the lack of training provided to agency nurses, their limited ability to know when and where they will work in advance, and in effect, their freedom to make decisions about their personal lives remain unacknowledged.

Realising the performative potential of numbers

The performative potential of numbers can be realised by successful performances prompted by those numbers. That is to say that the numbers, on the one hand, prompt performances which, on the other hand, need to be skilfully accomplished by actors for the performative potential to be realised. What I have referred to as prompting performances is similar to what Austin (1962) refers to as the 'certain force' of an illocutionary act. What I call performative potential is more in line with his notion of the 'particular effects' caused by perlocutionary acts. However, unlike Austin, who aimed to maintain a neat and uncluttered garden of performatives that could be happy or unhappy based on established conventions and procedures, I argue that the performativity of numbers is more complex. This is in part because numbers lack the structured semantic meanings that words have. Instead, as Vollmer (2007) argues, the meanings of numbers need to be negotiated in social situations – in my way of seeing it, they need to be performed. At the same time, numbers do not enter their social worlds as a *tabula rasa;* rather, they emerge in and through continuously ongoing feedback loops. Within these feedback loops, actors try out new things, learn, adopt new techniques, and abandon others, determine what works and what does not, and pay attention to how others react to the performances they employ in order to make their numbers authoritative, or ignorable.

For numbers to be performative, certain conditions need to be met. I contend that numbers prompt performances that can realise the performative potential inherent in them. This performative potential involves the conjuring of a new or altered social world, while the performances themselves are what make such

worlds habitable for those who may come to inhabit them. Through the performances they enact, the actors can either realise, partly realise, or fail to realise this potential. However, such a social force should not be seen as an inevitable outcome, but as a potential that can only be realised if certain conditions are met. In chapter three, I adjusted Austin's (1962) felicity conditions and proposed the following four conditions for the performativity of numbers. First, performances with numbers must be made to appear appropriate in front of an audience. Second, numbers must have a stated or presumed function within the context in which they are 'uttered'. Third, performers must appear appropriate in front of their audience. That is, they must not appear to be mistaken or erroneous. Fourth, performers must perform the thoughts or feelings that a particular procedure was designed to convey. The social force that numbers generate needs to be addressed in some way. This force implies performances which, if successfully accomplished, will enable the performative potential inherent in the numbers.

The notion that numbers prompt performances help to explain the relationship between people and numbers, as well as how certain numbers are made meaningful and significant to people. In their study on the performativity of accounting numbers, Faure et al. (2019) embrace the notion that numbers do things, such as causing people to react to them. However, they proposed that the numbers' capacity to 'speak' stems from the reciprocity between the numbers and the people they address. In other words, it is through the interaction between the number and the person who uses it, or those who are the audience, that numbers succeed in doing something or fail to do so. They suggest that 'numbers that matter or count are numbers that speak to people […] if nobody listens, cares or believes what the numbers are supposed to say, numbers will remain lifeless figures' (p. 353 f.). On a similar note, Heath and Starr (2022) argue that some of the most powerful and effective ways to use numbers is to make them into emotional numbers that people can relate to, feel for, and be affected by. The idea behind 'performance prompters' has been to advance the ways in which the reciprocity between people and numbers can be systematically investigated. The performances employed to realise the numbers' performative potential shed light on how actors can turn numbers into something that evokes emotions in people. At the same time, however, as I will show next, there are instances when numbers may affect actors even when they do not listen, care, or believe in them.

The figure on the right depicts the sequence of how numbers can work in everyday organisational life (see figure 3). Like most things that take place in our social lives, a model like this is, of course, a gross simplification of what 'actually' happens during the day-to-day dealings with numbers at work. That being said, what I have tried to convey with this sequencing is, broadly speaking, how the different sequences make up an overarching process of how numbers work and for how their performative potential can either be achieved or fall short. It is important to note that the sequence described is meant to suggest, in principle, an unceasing and never-ending process. For example, if a performance is rejected by its audience, they might ignore it entirely. In such a case, the process might 'revert back' to the previous step, and the performer could attempt a new and improved performance. Alternatively, a failed performance might cause the audience to react in a way that alters the meaning and significance of the numbers in a way that, in turn, alters the kinds of performances they prompt, which could prompt the performer to put on a different kind of performance. So it goes, on and on. What I am displaying here are but 'images' frozen in time, fossils that depict how this once happened. Still, it is through these fossils that the workings of numbers may be reimagined and envisioned.

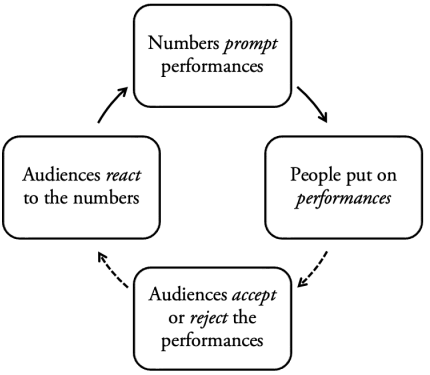

Figure 3. A sequence of how numbers can work.

Reactivity

So far, I have discussed all three numbers as performance prompters. I will now contribute to the concept of reactivity by proposing four additional interrelated terms: *ignoration*, *manipulation*, *metamorphosis,* and *transformation*. Dorn (2019) argues for a micro-level perspective on reactivity similar to what I have advanced in this thesis. He proposes that reactivity can fail, which is an important point. However, at the same time, success and failure tend to be capricious terms. This thesis, along with the matrix on forms of reactivity (figure 4, later in this section), suggests that it may be more fruitful to consider reactivity in terms of the reciprocal processes between social actors and the numbers they use or relate to. My argument extends and contributes to a theory on reactivity that places an

increased, and much needed, emphasis on the actions of individual actors (Dorn, 2019), different ways of reacting (Rahman, 2021), and various kinds of measurements (Espeland & Sauder, 2007).

As people and situations may change, so too may the numbers. As people react to the numbers, it is not just the people or the situations they are in that change, but the numbers change as well. This suggestion is neither new nor unknown to studies on reactivity or numbers and quantification more broadly. In fact, Strathern (1996) asserts the so-called Goodhart's law, which states that 'when a measure becomes a target, it ceases to be a good measure' (p. 4 cf. Hoskin, 1996). Indeed, the idea of reactivity is built into many common conceptions of measurement and quantification. For example, measurement entails improvement, and the various ways in which self-tracking tools expect and exploit reactivity through their gamification strategies (cf. Mennicken & Espeland, 2019). The point is that as people reflect on, discuss, and react to the numbers, it may not only be the people, their actions, or the situations they are in that are altered, but also the numbers themselves.

When I talk about alterations, I am referring to *meanings*. So, for example, when I talk about a person "becoming" a CKD-patient due to the GFR number, I do not mean to suggest that the number somehow made that person ill. What I do mean to suggest is that the number, in this case, engenders a set of meanings that can alter the social world for one or more actors. For example, by being assigned a GFR number, a person's sense of self or how they are seen and treated by others may be altered. Similarly, when a number is altered, I do not mean to suggest that it is forged or tampered with, like when a nine is turned into an eight. Rather, the alteration of a number changes its meaning for at least some of the social actors involved in a particular context. Such changes can be striking, such as when a trusted number is rendered untrustworthy in front of an audience, or they can be subtle, such as when a person who is assigned a medical number begins to think of him or herself and their actions in a different way, or is treated differently by others because of the meanings engendered by the number.

Although I have advanced a highly performative and potent view of numbers, I am by no means suggesting that numbers cause some kind of social determinism. Numbers cannot make people do anything. Yes, numbers can metamorphise people and situations in ways that turn these into something 'new' or 'different'. It is also true that any corresponding action, including ignoring, rejecting, or accepting such a metamorphosis, is an act of reactivity. Nevertheless, there are, in principle, no limits or boundaries to how an actor can or may react to the

numbers. I am, however, suggesting that performances make up a principal way to react. Yet the ways in which performances are made and displayed, what social effects they produce, and the motives behind them are ultimately empirical questions. It is people who interpret, relate to, make use of, and perform the numbers. In so doing, I argue that two principal reactions are possible: to perform in a way that alters the number, or to perform in a way that alters the actor.

Below is a simple matrix that shows four possibilities based on an altered or unaltered state for either the number, the actor, or both (see figure 4). A number that is unaltered and does not alter an actor in any way is an example of ignoration. In everyday life, where numbers come awash akin to sand ripples on a beach, it is easy to see how many may simply be ignored or gone unnoticed. Manipulation is when the meaning of a number is altered in a social situation. An example of an actor being metamorphised is when the actor, or his or her social world, is altered by a number, while the number remains unaltered. Transformation is when both the number and an actor are altered in some way. As a transformation, the number alters the actors who are the audience, but the actors also talk back to the number. Starr and Heath (2022) suggest that the best way to wield numbers is to turn them into emotional numbers, that is, to make the numbers move people in an emotional way to provoke people to think and act differently. It seems to me that in such cases, the number might not only provoke an emotional reaction among its audience, but the audience may also inscribe emotional properties onto the number. They may, so to speak, turn cold numbers into warm figures.

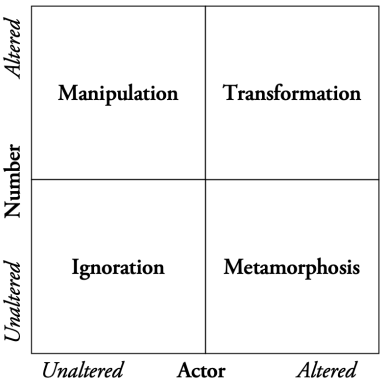

Figure 4. A matrix on reactivity of numbers.

Ignoration

By snubbing the measurements, it was often claimed that doctors at the RCU and elsewhere failed to comply with BHC standards, leading to lower scores for their professional group as well as for the hospitals in which they work. Despite the clinicians' efforts to the contrary, patients were frequently said to disregard their depleting GFR values and crash, which meant that they succumb to their disease or require emergency care to survive. Why? While the act of ignoring a number may seem clear-cut, such an appearance may be deceiving. For example, McGoey (2012) argues that in organisational arenas, ignorance is often seen as the antithesis

of knowledge which acts as a source of power. But ignorance, she says, can also be a productive asset available for strategic use. In other words, the act of ignoring can be useful for organisational actors, but such acts require effort and skill (cf. McGoey, 2007). This is especially so because *ignoration*, as I claim, is only achieved if both the number and the actor remain 'unaltered' by the process. Thus, an actor may ignore a number but still, or even because of it, be altered and metamorphised by the number. Previous studies now point in a similar direction. For example, in their seminal study, Espeland and Sauder (2007) describe how deans at law schools in the US would initially ignore school rankings and dismiss their importance, but would change their tune once the effect of getting poor ratings became apparent as those around them became 'hysterical' (p. 23). This is not to say that numbers cannot be ignored; of course, they can. The question is who can ignore them, at what cost, and to what effect? In other words, under what conditions can numbers be ignored?

Dorn (2019) argues that an important factor for actors to be able to ignore rankings and other performance metrics is the threat of humiliation. His argument stems from his study on US hospitals, where medical professionals, so he argues, were able to ignore hospital rankings because they did not perceive the rankers as capable of humiliating them. For rankings, which may involve significant public exposure, humiliation may be an important aspect to consider. Nonetheless, for measurements that are not made public, or at least not in ways such as official rankings, humiliation may not provide the best explanation for why actors ignore or react to the numbers (cf. Boedker et al., 2020). For example, humiliation or the threat of humiliation did not seem to play any role for the patients who reacted to the GFR number. Instead, those who did react to it in a clear way typically did so because of positive emotions such as pride or optimism, or to avoid negative emotions, like regret or shame. I, therefore, suggest that Dorn's (2019) reasoning should be extended, at least in principle, to include all kinds of emotions, positive and negative. What matters is the extent to which an actor is willing to embrace the performance associated with the number as meaningful, authoritative, and legitimate. Because a number will probably be ignored if it appears ignorable to the person who is supposed to be the audience.

Some general conditions for ignoration can now be proposed. *First*, ignoration is a mutual process; it is not just about an actor's ability to ignore a number. A person can ignore their taxes or bills, but they will not ignore them. It is, therefore, not sufficient for an actor to merely avoid or ignore a measurement; the actor must also be able to remain unaltered by the number. *Second*, the capacity to

ignore a measurement further depends on two factors related to how the number can be performed in a social situation. The capacity to ignore a number depends on (**a**) the social status and role that the actor who is audience to the number can lay claim to and (**b**) the authority and legitimacy that the actor who performs the number can assemble, deploy, and convey in that situation. *Third*, the reaction of the audience to a number depends on the feelings evoked by the performance of a number. Put differently, if a number cannot spark any emotion, it will not trigger any reaction either (cf. Slovic, 2007). The two cases of ignoration that were mentioned at the start can now be examined using these conditions.

The doctors who seemed to ignore the BHC number also appeared to be unaltered by the number. The BHC numbers did not seem to affect their work practices or occupational status. One interpretation is that the doctors' professional discretion negated any efforts to affect their compliance with BHC standards by means of new or different work routines. Instead, as I suggested in chapter eight, in response to poor scores, blame went upwards towards the doctors, while punishment struck downwards towards the agency nurses. In other words, emotional power was attempted where brute force, such as immediately sending people home, was not an option. While there were examples of doctors occasionally being named, shamed, and blamed for a poor result, they did not seem to be too bothered by this. One possible explanation for this is that the most common example of them failing was that they had worn their own pants, instead of their work trousers. It is within reason to think that these doctors in question could dismiss non-compliance as an arbitrary and ignorable infraction well within the confines of their professional discretion. Furthermore, the social and occupational status wielded by the doctors also afforded them with the power to ignore both the emotional and practical effects of a low BHC number. The agency nurses, on the other hand, could ignore the number, but they were not able to be ignored by it – for them, brute force applied.

Renaldo was a patient that ostensibly ignored the GFR number, and it also appeared unaltered by him. Unlike the BHC number, Renaldo's kidney function existed and affected him regardless of it being measured or not. From this vantage point, Renaldo fulfilled the first condition of ignoration as both he and the number remained unaltered. As for the second condition, as a CKD patient, Renaldo occupied a social role that made him especially perceptible to the GFR number. There was also no reason to suspect that Renaldo did not accept the legitimacy of the GFR number, or Casey's credibility as a nurse. If he had, he would most likely have avoided going to the RCU entirely – which was not an

entirely foreign thing for some patients to do. Instead, I think Renaldo ignoring the GFR number can best be explained by its inability to elicit the required emotions in him – fear. Despite Casey's best efforts to convince Renaldo that he was in a very poor and acute medical state, which I consider as a performance aimed at instilling fear, Renaldo insisted that he '*felt* fine'. Casey's performance and the GFR number did not manage to alter Renaldo's emotional state, at least not to the extent required for him to take the number seriously.

Few studies have explored how various numbers, such as rankings and ratings, can be ignored. Those that have usually focused on organisational responses to such measurements, rather than individual ones (e.g. Heffernan & Heffernan, 2018; Pollock et al., 2018; Sharkey & Bromley, 2015). For example, Moos (2015) suggests that for ratings to become authoritative, these must pass a "legitimacy threshold" before gaining acceptance from actors and stakeholders. In other words, if they do not pass such a threshold, they will be rejected or ignored. Here, I have extended Dorn's (2019) reasoning on times when reactivity fails by proposing the term ignoration to reflect how both the involved actor and number can be unaltered in an interaction. For ignoration to occur, the following conditions seem to be relevant: (**1**) a number that is ignored by a person should not engender any social effects (at least not to that actor); (**2**) the audience of a number should be able to lay claims to a superior social status or role compared to whoever performs the number; (**3**) the actor who performs the number should lack the necessary 'tools' to convey authority, credibility, or legitimacy required to perform the number (such as an adequate setting, props, personal front, and so on); and (**4**) the number should be performed in an emotionless manner, or in a way that elicits weak or contradictory emotions in its audience.

Manipulation

Did the nurses manipulate the results of their BHC observations for their own benefit, and did patients like Hugo attempt to manipulate the GFR number to cope with the increasing demands to alter his everyday lifestyle and habits? When it comes to measurements, various strategies to manipulate the numbers are among the most well-documented aspects of how numbers can be used or abused (e.g. Bevan & Hood, 2006; Espeland & Sauder, 2007; Huff, 1954; Rijcke et al., 2016). Basically, manipulation strategies tend to be thought of as actors' purposeful and opportunistic attempts to influence or gain control of institutional pressures or evaluations (cf. Oliver, 1991). Common manipulation strategies also involve decoupling, such as when medical professionals use 'defensive practices',

such as keeping two sets of books: one for legal issues and one for their daily work practices (McGivern & Fischer, 2012). My take, however, is that 'manipulation' is not just about surface level performances put on by actors who attempt to benefit from these acts, or who use them in their efforts to cope with or resist institutional pressures. Rather, at a more abstract level, such performances are aimed at altering the meaning and significance of a number at a deeper symbolic level (cf. Boedker et al., 2020). Here, I propose that manipulation is the process by which a number, but not an actor, becomes altered.

Consider the case of the BHC number and how the nurses performed their observations to produce it. They could have 'gamed' the number for their own advantage but, instead, they seemingly went out of their way to perform their observations to the best of their abilities. They employed various strategies to produce the BHC number. These strategies did not seem to be aimed at manipulating the number because, in principle, the number could have been entirely made up without the need for any such performances. Instead, I believe that these performances were aimed at altering the meaning of the BHC number at a local level. By putting on performances, such as to 'define the situation', and by creating the evidential basis for accountability to the BHC, the numbers' underpinning rationale was altered. Through the performances put on by the nurses, the meaning of the number was altered from scepticism and inquiry to trust and confirmation. Even though Casey (nurse) claimed that the BHC number enabled them ("we") to 'find out' how well they were doing, I believe Casey was speaking from the footing of being a patient safety representative and thus the "we" represented the hospital. For the nurses as a group, I would argue that the BHC number instead allowed them to *show* how well they were doing. The difference may be subtle, but it shows how the meanings that can be attributed to a measurement, at a local level, can alter what the number signifies to those who produce the number and relate to it.

Patients could not manipulate or 'game' the GFR number by pretending to be healthy and thereby scoring a higher number. However, by putting on performances aimed at conveying that they had embraced the GFR number and the alterations it called for in one's daily life, patients could *perform* the deeper meaning of the number – that they have been 'altered' by it. However, recall how the GFR number acted as a 'master number' that was able to subsume other related medical values, but also how patients were able to evaluate their everyday actions, such as eating habits and regular exercise, through it. A low and declining GFR number could signal that a person had not taken the necessary steps to keep

his or her illness at bay. In such cases, the nurses could use the GFR number to persuade their patients about the need to adjust their everyday lifestyle and habits and thus pass judgement on their 'poor' choices. Patients, however, might try to sidestep such advice or judgements by performing the role of being 'a changed person'. This is where the number opened itself up for manipulation. At a surface level, the GFR number signifies a person's kidney function. However, at a deeper level, the GFR number is about being embraced by its audience as a valid representation of their kidney function and as a catalyst for lifestyle changes that should steer patients to improve their medical condition.

As a form of reactivity, manipulation can be understood as when an actor is unaltered by a number, but succeeds in altering the significance or meaning of that number. This kind of manipulation is akin to acts of 'decoupling' at a micro-level; however, the difference is that it is not just about surface-level compliance but about subtly altering the meaning of the measurement. Actors can fail or succeed in their attempts to manipulate a number. I argue that what determines if a number is manipulated is its ability to 'talk back'. In the case of the BHC number, there was no way for the number to challenge the manipulation performed on it. The BHC number, as it were, could speak for itself, but its words were hollow and no more or less than what they were claimed to be by those who manipulated them. That is to say, numbers like the BHC number have no way to ward off manipulation and are thus ripe for alterations, however great or small. The GFR number, on the other hand, seemed to be capable of 'talking back', for example, by refuting claims. The number's ability to do so stemmed from its character as a 'master number'. This is because it was not only able to subsume other numbers, but also to use these numbers to reassert itself as an authoritative claim. For example, claims made about having embraced a new and improved lifestyle could be rejected by an unaltered GFR number, which also, importantly, could be supported by the array of additional bodily and medical values that were encompassed by the GFR number.

For manipulation to occur, it seems to me that the number should appear as sufficiently important or meaningful to its audience as to tempt them to tamper with it, rather than to ignore it. For manipulations to take effect, the numbers need to be vague enough for such alterations to occur without the number being able to 'speak back'. This way of considering manipulation extends Boedker et al. (2020) reasoning on 'counter-performativity' (MacKenzie, 2007) by suggesting that numbers that lack the ability to be scrutinised and evaluated on a basis other than itself will be ripe for alterations by actors who may alter them for their own

advantage or ease. The process of manipulation also suggests that numbers are not naturally powerful, but that 'weak' numbers such as the BHC number can become powerful when the meanings of the number are altered by the actors who make the numbers matter to them. While it may seem subtle, what is thereby suggested is that the authority, influence, and 'strength' of a number is not bound to the number as such, or derived from how the number goes from the top of an organisation to the bottom. Rather, it is the social actors who, in using and relating to the numbers, either make them authoritative or cast them aside.

Metamorphosis

Metamorphosis is the process by which an actor or situation is altered in a way that is unescapable. It triggers an alteration in the social fabric that makes up an actor's social world. For example, an actor may be defined or categorised in a particular way that may change how the actor is perceived by himself or others (cf. Hacking, 1986). Consider one of the most famous stories about metamorphism, *the Metamorphosis* by Frantz Kafka. In the story, Gregor Samsa wakes up one day to find himself transformed into an insect, unable to speak or to move as he once did. His body and his social world have changed, but in his mind, he is still the same as he was before. However, because of his metamorphosis, there are now certain things that he is unable to do, and the actions that he performs are seen in a different light by those around him who observe his actions. A similar tale can be found in the Norwegian fishing communities that Holm (2007) observed. In these communities, calculative techniques significantly altered the meaning of fish and fishing by rendering wild fish 'traceable, identifiable, predictable, and controllable' (Callon, 2007 p. 337) in ways that metamorphised them into 'cyborg fish' (Holm, 2007). An actor does not need to accept such an alteration but can choose to reject or ignore it. However, to ignore it implies an acceptance of such a categorisation or definition. Gregor cannot escape his metamorphosis, but he can choose to embrace it as a transformation. Metamorphosis can be seen as a process by which a number 'works' and *makes a difference* (cf. Holm, 2007).

The GFR number worked in a similar way as Gregor Samsa's metamorphosis. For the person to whom the GFR number refers, and whose life it intervenes, the number metamorphosised the person and established a force that compelled them to either embrace, reject, or ignore their diagnosis. As the GFR number intervened in the person's life, the person was, so to speak, metamorphised. Here, it can be fruitful to examine this claim by briefly invoking the idea of 'sensemaking'

(Weick, Sutcliffe, & Obstfeld, 2005), 'sensegiving' (Gioia & Chittipeddi, 1991), and 'sensebreaking' (Pratt, 2000). Simply put, sensemaking is a retrospective thought process through which an actor attempts to make sense of something unexpected, complex, and often chaotic. Although many CKD-patients could be observed trying to understand their own situation after their diagnosis, many relied on their own personal bodily experience to do so. They 'felt fine', as it were. Thus, in their attempts to prevent their patients from 'crashing', the nurses engaged in practices like sensegiving. In essence, the nurses would inform their patients about their illness, its chronic nature, and its severity, along with the available treatment options. My point, however, is that these two ways of making sense – the patients' bodily experience and the nurses' professional knowledge – produced conflicting accounts. The difference made by the GFR number was that it acted as a sensebreaking device aimed at breaking down the patient's intuitive way of making sense, namely by relying on their own bodily experience. The GFR number metamorphised patients both by casting them into the role of being a CKD-patient, but also by breaking their self-perceived sense of health in favour of the 'objective truth' conveyed by the number and sanctioned by the nurses' expert knowledge.

The PD goal metamorphised by *framing* situations and actions for both patients and nurses in particular ways. Lorino, Mourey, and Schmidt (2017) define framing as 'an ongoing social process of context production in an unfolding situation' (p. 33). The context that was produced is different for the two social groups. For the nurses, it was forged by frames of pending doom, a sense of urgency, and a negation of alternative actions and explanations. That is, if the PD goal were not achieved, a real risk of another dialysis crisis was claimed as an outcome, and no real alternatives to achieving the goal were made to exist. For the patients, PD was framed as their only valid and reasonable treatment option. The alternative, HD, was described as inferior, harsher, and something that should be avoided if possible. Efforts to explore and examine these claims were largely shut down on both ends. Certain structures of meaning, along with the capabilities and the responsibilities of the nurses and their patients, were provoked or impeded by the metamorphosis. This happened as situations and choices were framed as good, bad, valid, and reasonable. The social effect of this kind of metamorphosis was that both the nurses' and their patients' ability to make an informed decision about how their choices and actions were legitimate and good was impeded. For the patients, their ability to engage in real and substantial discoveries about themselves was inhibited. For the nurses, the PD goal blocked their ability to explore and intervene in underlying features of their work and

organisation that they saw as problematic – such as being understaffed, having a poor workplace environment, lack of adequate compensation, and so on.

The BHC number provides a final example of metamorphosis by prompting a particular notion of reality and accountability while obscuring alternative viewpoints. In principle, this claim is similar to what other scholars have found to be the case for different indicators in healthcare settings. For example, Wallenburg, Essén, and Bal (2021) argue that such indicators should not be seen as validated by virtue of their correspondence to reality, but rather as performative acts that create a specific reality. The BHC number generated two social effects. First, a social reality was established that provided the evidential basis needed to define the situation in terms of what was going on, who was responsible for what, and about what happened. This allowed authoritative claims to be made by the actors. Nonetheless, competing notions of reality also became obscured or overlooked. Second, the metamorphosis altered the actors' 'footing' (Goffman, 1974, 1981). That is, the BHC number altered how the involved actors were able to define the situations they were in and the actions they performed. As this happened, the actors were metamorphosised by being cast onto another footing from which they now had to act. As the situation was defined in ways that made individual healthcare actors responsible for good or bad hygiene compliance, more systemic issues such as management practices, organisational aspects, or political decisions became downplayed or obfuscated.

Transformation

The process of transformation is one where the performative potential of a number has been realised through a successful performance put on by an actor, which, in turn, has also been accepted and embraced by its audience. What I am proposing differs from what Pollock et al. (2018) propose when they argue that "organisations no longer simply conform to dominant measures but are instead 'transformed' by them" (p. 65). My point diverges from these authors' conception of transformation in important ways. At the most basic level, I hesitate to embrace the notion that organisations can conform to measurements. Or, at least, I struggle to understand the implications of such a statement. My contention is that only individual actors can react to the measurements, and this is also the premise for my conception of transformation. Moreover, as I suggested already in chapter two, even the process of conforming can, of course, be seen as a transformation. The notion of transformation that I am proposing is therefore more concerned with the transformation of individual actors and numbers, through a process of

alteration from one state of being to another. Once again, we turn to the three numbers to see how this happens.

The GFR number cannot compel an actor to do anything. However, at the same time, an actor cannot escape his or her metamorphosis. What an actor can do is to embrace the metamorphosis as a transformation. In doing so, both the number and the actor may be altered in the process. The GFR number not only encouraged medical professionals to identify CKD patients and to intervene in their lives, it also prompted them to put-on performances aimed at convincing and persuading their patients about their illness, its seriousness, and the actions that they needed to take to hamper its progression. However, consider how a patient is transformed only when he or she embraces and internalises the moral of the GFR number, namely that he or she must change their ways. They must, as Hugo suggested, 'make the journey'. Embracing transformation entails surrendering certain aspects of one's life to the presumed expertise of the medical professionals. Those who refuse are bound to eventually 'crash', as claimed by nurse Casey. Such a choice can be seen as a form of denial, ignorance, or an inability to change. However, it can also be seen as a triumphant act of self-determination and an affirmation of a personal choice over one's quality of life, as the actor understands and values it. In either case, the GFR number drove the person to whom it was ascribed to make a tough decision. Patients were transformed if they accepted the GFR number as a reflection of their kidney function. The meaning of the GFR number was altered because it no longer 'just' reflected their kidney function but also became a way for the patients to make sense of and ascribe meaning to their everyday actions, choices, and habits. Contrary to how Essen and Oborn (2017), in their study on the performativity of rheumatology numbers, found that these numbers established a boundary between patients' health state and everyday life activities, my findings suggest that the transformation of the GFR number dissolved such boundaries.

As a transformed number, the PD goal assumed an altered state, which measured the nurse's performances, rather than reflecting the patients' choices. This is because if these performances were successful, the patient had no choice. For the PD goal to be successful, both the patients and their nurses needed to engage in an act of transformation. That is, the patient needed to embrace an enterprising spirit and assume the role of a 'good patient', while the nurses needed to develop an enterprising spirit that prompted them to perform acts of 'discursive closure' (Deetz, 1992). These acts, in turn, were necessary to convince and persuade patients that PD was the best and only reasonable option for them. The emotions

that were evoked by performances of conviction, such as the potential risk of a dialysis crisis, were crucial in how the number could be interpreted and performed by the nurses. Similarly, nurses' performances, which stressed the harsh and mechanical aspects of HD, were essential for conjuring up reluctance towards HD and stirring up the positive emotions necessary for patients to embrace the enterprising spirit required for PD. The real issue with the PD goal was not that it may fail, but rather the cost at which it might succeed. The PD goal was obfuscating structural healthcare issues, such as understaffing, increased costs, and poor work climate. Hence, there seems to be a risk that this hiding could make these problems worse, and make the issues that I have detailed in this thesis even more accentuated.

The process of transformation starts when an actor reacts from the footing he or she has been cast onto by the numbers, or moves away from it. The BHC number prompted a particular definition of actors, actions, and situations, as well as metamorphised the actors by casting them onto a particular kind of footing. This number established a particular version of reality where actors were assigned to roles, and where certain actions were imbued with significance, while others could be conveniently ignored. Consequently, certain claims could be made in a credible way, while others could not. The stated purpose of the BHC number was to reflect everyday practices related to personal hygiene and clothing rules. At the same time, the number was also claimed to increase compliance rates in places where it was used, much like the 'self-fulfilling prophecies' described by Espeland and Sauder (2007). Those who were measured made use of the number through various performances that transformed its meaning. The actors skilfully transformed the BHC number by embracing it to define situations and to construct statements of facts through which they could assign praise or blame. However, in doing so, the actors embraced the metamorphosis and accepted the definition of the situation issued by the BHC number, namely that compliance with basic hygiene was ultimately an individual responsibility and that the score was the result of individual performances, or failures.

CHAPTER 10
CONCLUSION

Introduction

By developing, extending, and occasionally challenging both emerging and foundational aspects of the performativity of numbers (Espeland & Stevens, 2008) and numerical reactivity (Espeland & Sauder, 2007), this thesis has made two key contributions to these theories. First, it has contributed to the emerging body of works on the performativity of numbers by advancing a much-needed set of distinct conditions for a performativity of numbers (cf. Boedker et al., 2020; Dorn, 2019; Fırtın & Karlsson, 2020), along with an in-depth analysis of what it means for a number to be *made* performative. I have contended that a performativity of numbers is best understood as a kind of social force that carries a performative potential in need of being realised through performances made by people. Such a performative potential can go unrealised, partially realised, or wholly realised. Second, the thesis has contributed to the emerging bodies of work that have begun to challenge some of the deterministic tendencies in studies on reactivity and measurements by showing at least some of the ways in which people may act differently from what the numbers prescribe (e.g. Boedker et al., 2020; Dorn, 2019; Fauré et al., 2019; Power, 2015). I have done so by proposing a matrix that is sensitive to different ways of reacting to numbers.

Broadly, this thesis has contributed with a display of the essential ambiguity of quantification (Mennicken & Espeland, 2019). In contrast to how many other studies have focused on organisational responses to measurements (e.g. Heffernan & Heffernan, 2018; Pollock et al., 2018; Sharkey & Bromley, 2015), this thesis offers an in-depth analysis of numerical reactivity at the level of individual actors, which reveals their different reactions to the numbers (cf. Dorn, 2019; Wallenburg et al., 2016). It has provided a detailed analysis of different ways in which actors can react to the numbers – while also acknowledging that the numbers can also 'act back'. The thesis contributes to the bodies of work showing

that a lot of skilled work is required by social actors for the numbers to do things (Espeland & Stevens, 2008; Fauré et al., 2010; Goretzki et al., 2018; Lorino et al., 2017; Vollmer, 2007). Moreover, it has developed and extended our knowledge of the 'pragmatic, dynamic and situational achievements of using numbers' in everyday social interaction (Vollmer, 2007 p. 597).

In this last chapter, I address my research questions, discuss broader implications derived from the study, and wrap up the thesis with some final remarks.

What do Numbers do?

Numbers generate a kind of social force which I have referred to as performance prompters. This kind of social force does not mean that numbers somehow automatically perform or accomplish things in social situations. Rather, these social forces need to be dealt with by people in some way – they need to be performed. In this thesis, my argument revolved around the idea that these forces can only be dealt with by the actors who use, relate to, or react to the numbers that generate that force. What I have ultimately suggested is that numbers prompt performances that, if successfully accomplished, will enable the numbers' performative potential. However, success in these actions does not mean that they will be accepted by their audience. Their potential impact depends on an array of possible factors, such as the immediate and broader context in which the numbers appear, the people involved and the social roles they occupy, as well as the stated or presumed function of the numbers.

What numbers do depends on the conditions needed for their performative potential to be realised. In this thesis, I have advanced four conditions needed for such a realisation. These conditions connect directly to the 'working premises' for a performativity of numbers as proposed by (Espeland & Stevens, 2008). The four conditions read as follows:

I. A numerical performance must first be made to appear appropriate in front of an audience.
II. The numbers must have a stated or presumed function within the context in which they are 'uttered'.
III. The actor who performs the number must appear appropriate in front of their audience.
IV. The performers must perform the thoughts or feelings for which a particular procedure was designed.

By proposing these conditions, the thesis has contributed to a view of performativity as an ongoing social accomplishment, in line with what Vollmer (2007) and Fauré et al. (2019) have proposed. Thus, the thesis challenges the notion that numbers *are* performative, arguing instead that they need to *be made* performative by social actors.

What do People do with Numbers?

People put on performances to realise the performative potentials of numbers. The meanings of numbers are woven from the fabrics of everyday actions. It is in everyday social interactions that meanings are made, negotiated, embraced, or rejected by people. Numbers may determine worth, prompt or impede behaviours, allocate resources, and shape our ways of thinking and being. However, individuals may also act in return by resisting, embracing, or escaping the roles, situations, or choices they are cast into or handed by the numbers. Indeed, people and their actions, as well as the situations they are in, can be altered by numbers. However, the meanings and significance of any number can also be altered by people and their actions, as well as by the situations in which they find themselves. While the performances put on by social actors enable the performative potential of the numbers, those who react to the social worlds conjured by the numbers can embrace, reject, or escape these worlds – or even create new ones.

Performances are skilled social accomplishments, and like any feat, there will always be a risk of failure or falling short. This thesis has described three performative potentials, namely the establishing of interventions, an enterprising spirit, and accountability. I have argued that if a performance is successfully performed and accepted by the audience, a process of transformation will ensue. If, however, a performance is successfully performed but rejected by its audience, the performative implication that follows is what I have called a metamorphosis. If a performance fails, a process of ignoration or manipulation can follow. By showing how this happens at the level of everyday social interaction, the thesis has contributed to the emerging literature, elucidating how the social effects of numbers are not 'predetermined outcomes' or derived from 'fixed properties' of the numbers, but rather through 'skilled performances' (Lorino et al., 2017) and 'situated accomplishments' (Goretzki et al., 2018).

How do Numbers Work in Organisations?

In everyday organisational life, I have argued that numbers work by prompting performances and causing people to react to them in different ways. In this thesis, the GFR number, the PD goal, and the BHC number were carefully analysed to show how they prompted performances centred around persuasion, a genuine conviction, and defining the situation. These performances were made because the numbers engendered enticing social worlds in which these performances were necessary for these worlds to become 'real' to those who participated in them. The social world of intervention called for performances of persuasion; a world of enterprising spirits cried for performances of conviction; and performances of defining the situation were urged by a social world of accountability. These social worlds make up what I have called the performative potential of the numbers. The three cases also revealed how the performative potential inherent in these numbers could be realised, or fail, through the performances put on by people in social situations.

By studying failed or successful performances, a core contribution of this thesis has been to develop a theory on reactivity, as consisting of four reciprocal social processes: ignoration, manipulation, metamorphosis, and transformation. These processes elucidate at least some of the different ways in which social actors can react to the numbers, while also revealing how both the actors and the numbers themselves can be altered, or remain unaltered, within social situations. This theory on the reflexive and reciprocal processes between people and the numbers they use or relate to, ties in well with the ongoing discussions on how, why, and when people care for numbers (e.g. Fauré et al., 2019; Rahman, 2021; Wallenburg et al., 2021). In sum, this thesis has developed significant insights into the interplay between the numbers doing things, people reacting to these things, and the chain of altered meanings and additional actions that ensue.

Broader Implications

Numbers are at the centre of some of the most salient dichotomies of the modern era. In everyday talk, we frequently find numbers at the heart of topics such as objective-subjective, knowing-guessing, rational-emotional, true-false, and so on. One implication of this thesis should be that such dichotomies, at least as far as they pertain to the relationship between people and numbers, should be

downplayed, if not abandoned. Put differently, these dichotomies should not be seen as solid and reified social facts, but rather as dynamic and performed social accomplishments. That is to say that numbers, at least amid social interactions, do not lend themselves well as the marker that divides the line between such dichotomies. Only in the untainted world of fantasy can such pure divisions exist. In our everyday lives, we are not just caught in the middle of things, or torn back and forth, or from side to side. Rather, throughout the course of our everyday lives, we bring things into existence that were not there before, we are metamorphised by things, and we transform things into something unexpected or unintended. What I wish to suggest is that more numbers do not simply lead to an increased objectivity, or that fewer numbers render things more subjective. The presence of numbers often changes things, and the relations between individuals and numbers can lead to new, exciting, or frightening social dynamics. Next, I reflect on some of these broader dynamics of the reciprocal interplay between people and numbers, along with some broader conditions that may propel, enable, or reinforce such dynamics.

Numbers call for helpers or hinderers

Numbers do not succeed or fail by themselves; they need our help. A significant body of literature have shown that a lot of skilled work is required from social actors for numbers to do things (Espeland & Stevens, 2008; Fauré et al., 2010; Goretzki et al., 2018; Lorino et al., 2017; Vollmer, 2007). A core argument made in this book has been that numbers work because of the performances people deploy with or because of the numbers, not despite of them. In other words, it is through the actions of individuals that numbers are made "real", authoritative, and influential, or turned fake, trivial, and inconsequential. Throughout this thesis, it has repeatedly been shown that numbers need a lot of help. It may be fruitful to think and to speak of these actions as being performed by social actors who take on roles, knowingly or unwittingly, as either *helpers* or *hinderers* for numerical performativity.

The term 'helpers' is meant to encompass the active engagement required by various actors to make numbers performative. Similarly, the term 'hinderers' is meant to be suggestive of the work required to make the numbers feeble – or to wield them in ways contrary to their design (cf. Boedker et al., 2020). Now, an attentive reader might stop and wonder why hinderers are necessary. In other words, wouldn't a lack of helpers be sufficient? That is, why would an active hinderer be required when the lack of helpers should do the trick? The reason for

this, I imagine, is that the numbers, as I mentioned in the previous chapter, enter our social worlds with "baggage". It is this 'baggage' that needs to be addressed by social actors by them either helping or hindering the numbers. Basically, compared to other forms of accounts, numbers more often tend to be accepted at face-value and require more overt contestation to be rejected, whereas non-numerical accounts frequently require corroboration (cf. Michaud, 2014; Munro, 2001; Springer, 2020).

Moreover, the term "helpers" suggests not only the need for actors to make use of the numbers in appropriate ways, that is, in accordance with their professional roles, within the 'correct' setting, or in line with conventional practices. As helpers, social actors need to perform these things carefully and skilfully to enable the performative potential of the numbers. However, helpers encompass more than just the performances by social actors. Instead, they consist of all things that are required to realise the performative potential of numbers, which include physical settings, tools, clothes, as well as more intangible assets like professional jargon and social status. This is all to say that aspects such as social roles or settings are not solid entities that primarily affect situations, but dynamic aspects that depend on how social actors design and make use of them. The layout of a hospital and its interior, the clothes worn by medical professionals, and an actor's manner of speaking or acting are not merely contextual but ongoing social accomplishments that are continuously designed and re-designed, acted, and re-enacted. Put differently, the performativity of numbers relies less on formal aspects such as on one's social role or setting and more on how individual actors can perform these aspects in ways that allow them to utilise or dismiss them. It is from such a perspective that it becomes fruitful to speak of helpers or hinderers of numerical performativity.

What the helpers do, largely, is to perform – or facilitate performances – on the frontstage, such as when the GFR number was performed in ways that made it appear as self-evident, natural, and largely taken-for-granted. "Hinderers" can be thought of as a counter-image juxtaposed to the helpers. When it comes to the helpers, I have suggested several ways in which they assist in reinforcing the power of a certain number, say the GFR – which once again may include non-human entities – such as the healthcare system, hospital buildings, healthcare professionals, clothing, equipment, and so on. What hinderers can do is to reveal backstage dramas that shake up or loosen such beliefs and convictions about the numbers. Sometimes, it can be highly beneficial for helpers to make numbers perform; however, there may also be times where hinderers can shed light on issues

that force people to reflect on, comprehend, and deal with issues that might otherwise be left in a state of ignorance, behind the stage. Hinderers are important because they can force people to reflect more deeply on their use of numbers and stop them from acting on autopilot.

The relationship between numbers and people as master and slave

"*Master numbers*", such as the GFR number, are capable of 'speaking back' to the actors who wield them or are subjected to their influence. Here, I will reflect on what may be the most striking characteristics of master numbers by also contrasting them with what I propose as their dichotomous counterpart: "*slave numbers*". These two roles, master and slave, serve as conceptual tools that may help to elucidate why some numbers gain authority over individuals, while others seem to be much easier to ignore or manipulate. The term "slave" is a loaded term, but the master-slave dichotomy is nonetheless a well-established conceptual apparatus in technology, engineering, and philosophy – however disconcerting such use may seem (cf. Eglash, 2007). Thus, further explanation is warranted.

In a limited way, master can be understood as 'powerful' and slave as 'weak'. But this conceptualisation overlooks several different and important additional aspects captured by the master-slave dichotomy. For one, the powerful/weak dichotomy is more suggestive of 'essential' qualities in these numbers, rather than as being social positions that actors assign to them. Moreover, I want to stress that these are numbers that are *doing* things, rather than *being* things, and that these roles are played out in relation to its counterpart. Master numbers act authoritatively and controlling, while slave numbers act compliant and malleable. These are not qualities of the numbers, but roles that are enacted through number-people interactions. In these interactions, people also take on the opposing role, respectively. Hence, metaphorically speaking, we may become slaves to the master numbers, while slave numbers may invite us to become their masters. In other words, it is through the reciprocal interplay between individuals and numbers that these 'kinds' of numbers are enacted.

So, what makes a number a master number? The GFR number, as I mentioned in chapter six, acted like a master number, capable of subsuming other numbers; moreover, it was able to 'talk back' by calling upon these numbers when it was challenged or tampered with. So, when it came to the GFR number, various counter-claims could be checked and challenged using the numbers that had been subsumed by it, such as by invoking indicators like salt levels, creatinine,

potassium, and so on. However, importantly, such indicators could not be used to challenge the strength of the master number. The GFR number also organised much of the everyday work at the RCU, such as by facilitating the nurses to sort and prioritise their patients by the severity of their illness, as well as by enabling the RCU to structure itself by issuing roles dedicated to certain patient categories that, in turn, were determined by the GFR number.

Master numbers parallel the professed strength of ranking numbers, as described by Sauder and Espeland (2009). Ranking numbers also seem to subsume underlying indicators through a social process of 'commensuration' (Espeland & Stevens, 1998). However, in contrast to commensuration, which is the process of turning several different indicators into one common metric, master numbers are instead numbers that are granted a superior role and authority over other numbers. Perhaps more importantly, master numbers seem to benefit from what I will label as *protective barriers.* These are meant to suggest that there is an ambiguous and unidirectional connection between the master number and the "weaker" numbers they subsume, such as indicators. In other words, in ways similar to what Rahman (2021) found in his study on opaque ranking systems, I suspect that the strength of master numbers, at least in part, comes from ambiguities surrounding the master number and its underlying indicators. Such ambiguities serve as protective barriers that impede the ability of social actors to determine how a master number can be manipulated, ignored, or rejected. People are, therefore, more prone to be left succumbing to the number, decoupling from it, or experimenting with ways to affect it. Master numbers, I posit, rely on processes of mystification through which the connection between the numbers and their underpinning calculations, or indicators, is severed or veiled from public scrutiny, or where the connection between the master number and its basis is made ambiguous.

Conversely, slave numbers, or weak numbers, are those that are easily tampered with and unable to 'talk back'. These numbers either lack protective barriers, or if such barriers exist, they may be known only to certain actors while remaining unknown to others. The BHC number serves as an example of such a number. In the case of the BHC number, the connection between its indicators and the commensurated number, the BHC, was unambiguous. As a slave number, the BHC number was laid bare for various manipulations. In contrast to master numbers, slave numbers are not only weak in terms of lacking authority, they are so meek that they may tempt actors to use them for their own advantage.

Moreover, they are malleable enough to allow these actors to convincingly assign new or different meanings to them.

I believe this to be a pivotal insight into how numbers work in organisational life. That is, similar to findings by Wallenburg et al. (2016), one implication of this thesis is that certain numbers are not naturally powerful. Instead, 'weak' numbers, such as the BHC number, may become powerful when their meanings are altered in social situations by the actors who make the numbers matter to themselves and others. While it may seem subtle, what is thereby suggested is that the authority, influence, and 'strength' of a numbers is not bound to the number as such, or derived from how the number goes from the top of an organisation to the bottom – or vice versa. Rather, it is the social actors who, in using and relating to the numbers, either make them authoritative or cast them aside.

If individuals can make 'weak' numbers 'powerful', they may also be able to do the opposite by rendering 'strong' numbers 'feeble'. Boedker et al. (2020) argue that actors can take counter-performative measures against ranking numbers. I have previously extended and developed counter-performativity by proposing a particular process of manipulation where actors are able to alter the deeper meaning or significance of a number. I suggested that for this to be possible, the number must lack the ability to 'speak back' to such acts. By scrutinising how a seemingly 'weak' number was nonetheless deemed to be authoritative by the actors who produced it, this line of reasoning has implications for how numbers can gain authority and influence in organisations. In other words, it is through the reflexive and reciprocal processes between individuals and the numbers they use or relate to that the social significance of numbers is negotiated and enacted. This is not to say that such negotiations are easy and straightforward for the actors who engage in them – far from it. In fact, odds are that those who are most in need of shifting such power dynamics are the ones who may be least equipped to do so. Perhaps it is here that the incendiary dichotomy may prove its worth, as the master-slave dichotomy may help these groups of individuals rally together to become masters of the numbers.

Numbers as regulators for (organisational) anxiety

One of the basic ideas regarding the performativity of numbers is that numbers do not reflect reality but actively produce it (e.g. Espeland & Stevens, 2008; Hines, 1988; Levay et al., 2020; Morgan, 1988). One broad implication arising from this thesis is that a given number does not have any meaning outside of that

which is given to them by social actors. Instead, similar to Vollmer (2007), I have argued that the meaning and significance of any given number needs to be negotiated in social interaction. At the same time, in our everyday organisational lives, numbers often seem to function to regulate organisational anxiety, serving either as a form of *sedative* or as a *stimulant* for discussion, action, and change. For example, it is frequently said that by measuring something, we can know about, change, and improve that something. However, in many cases, we are probably able to know, change, and improve things without measuring them. The issue, of course, is that we may not know how much or little we know, change, or improve those things. In such cases, the role of numbers seems to be more about reducing an ontological or existential anxiety that numbers seem particularly well equipped to alleviate (cf. Lupton, 2016). Therefore, to the extent that it may be meaningful to speak of a particular broader meaning of numbers, I propose that they can regulate organisational anxiety by acting either as sedatives or stimulants.

In diagnostic terms, one may posit that the more anxious an organisation is, the greater the need for measurement activities to calm its anxiety. Conversely, the more complacent the organisation is, the greater the need for numbers that can stimulate anxiety. At its worst, because of the tendency for numbers to beget numbers, there is a risk that the sedatives turn into an addiction and an overreliance on numbers. In contrast, more confident organisations should be less susceptible to an over-reliance on numbers by balancing their use and reliance on numbers with other forms of knowledge. One possible way to probe organisational anxiety levels, in terms of measurements, could be to ask and reflect on *why* something is or ought to be measured. For example, in chapter eight, one of the nurses suggested that the chaotic construction work at the hospital during the time of this study had caused what they referred to as 'organised compliance work', whereby the BHC number was one example of such work. Issues such as these seem to provoke organisational anxiety, yet because of the value that is placed on numbers in western society, numbers seem to lend themselves as powerful defences against such anxieties.

The term anxiety may appear patronising, but there are, of course, many valid reasons for feeling anxious in organisations – perhaps especially so in healthcare and nursing (cf. Menzies, 1960). Moreover, sometimes numbers can be helpful tools that allow us to 'figure stuff out' or to see and understand something that we may otherwise struggle to comprehend. Indeed, numbers can sometimes be truly magical in that sense. For example, consider how the GFR number could, at least in principle, help to solve the complex pedagogical problem of *showing*

and *persuading* patients about the severity of their illness, despite these patient's own experience about their health – that they felt fine. However, it is worth pointing out that for such persuasion attempts to be successful, the patients first needed to become anxious about their own health assessment. This would also help explain why changes in the GFR number were so important to patients when they assigned value and meaning to the changes they had made in their everyday lives, such as eating healthier or exercising. By most accounts, while these are self-evidently good things for one's health, the GFR number, nonetheless, played a crucial role in either calming or encouraging individuals to act, depending on the results conveyed by the nurses. Similarly, the BHC number was arguably not particularly useful for knowing more about compliance with the BHC. It was, however, useful for alleviating organisational anxiety associated with being unable to account for how well the organisation was doing. Overall, it may sometimes be more fruitful to ask if a number is able to reduce or alleviate anxiety, as well as to spark emotion, action, and concern, rather than if it is trusted or distrusted.

Final Words

A study such as this is but a crude painting of what everyday reality is like. Often, everyday life may appear mundane. But underneath its dull display lies an array of immensely complex relationships between people, thoughts, and things. In real life, people talk about things, come up with new ideas, reflect, react, and transform their social worlds on an ongoing basis (cf. Giddens, 1976). In principle, what numbers do, and what people do with numbers, and how numbers work in organisations will always be empirical questions. Throughout this thesis, I have argued and showed how the role of numbers in everyday life is a continuous process formed by a dynamic interplay between individuals and numbers. Numbers perform by prompting actors to put on performances with or because of the numbers that, in turn, cause a chain of reactions. These reactions are made up of complex and dynamic social process in which both the actors and the numbers can influence each other. I would, therefore, be hesitant to carve out and assign a privileged position to either the acts of numbers or those of people.

In everyday organisational life, and most likely in our daily lives as well, numbers work like a magic trick. We often possess little to no insight about how and why they work as they do. Yet, when they are performed successfully, we may easily find ourselves spellbound and go along for the ride. When they fail, we either

ignore them, or spot and mock their faults and flaws. However, too often, we focus on where we think the action is, or where we think it will be. But just like in a magic trick, the magician's performance does not lie in the prestige, but in all those sequences that make the audience look elsewhere. As critical scholars, reflexive practitioners, and people who all use and are affected by numbers, we must learn to look for these sequences of action and not be too dazzled by seemingly impressive, powerful, or authoritative numbers – or reject the numbers as flawed, incorrect, or trivial. Instead, we must focus our attention on how numbers perform and how they are performed. For better or worse, we have used numbers to change the world we live in. We have significant agential leeway to react differently to the numbers, but unless we pay attention to them, numbers may alter us in ways that we may not be able to escape.

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Performing Numbers

An Ethnography of Numbers in Everyday Organisational Life

Numbers permeate our everyday lives, our work, and our organisations. This book presents an ethnographic study on the role of numbers in everyday organisational life at a Scandinavian hospital. The thesis explores what numbers do and what people do with numbers in social interactions at work. At hospitals, numbers are frequently relied upon by doctors, nurses, patients, administrators, and managers to organise, administer, evaluate, and manage the daily work. However, numbers are also frequently critiqued, debated, and contested by people. This book investigates what this all means and how things could be different by examining the conditions needed for numbers to become authoritative, for them to be rendered powerless, counter-productive, or fall anywhere in-between.

Johan Jönsson is a researcher in Business Administration and Critical Management Studies. He has an interest in a range of subjects with a particular focus on everyday social interaction. Among his areas of interest are qualitative and ethnographic research methods, interpretative work, quantification, performativity, dramaturgical performances, and social critique.

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